RELATIONS AND RUNES

The Baltic Islands and Their Interactions During the Late Iron Age and Early Middle Ages

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Relations and Runes – The Baltic Islands and Their Interactions During the Late Iron Age and Early Middle Ages.

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PER WIDERSTRÖM AND BEN RAFFIELD

Introduction

This book is the outcome of a workshop in Visby in 2017. It is a joint venture between two research projects concerned with the Viking Age – *The Viking Phenomenon* and *Everlasting Runes*, and Gotland Museum.

The Viking Phenomenon is a ten-year research initiative aimed at studying the very origins and development of the period that we now refer to as 'the Viking Age.' The project focuses on the crucial centuries either side of the year 800, with a view to understanding the factors that underpinned the violent expansion of Scandinavian interest into the Baltic and beyond. As a part of this, we are particularly interested in social development and contact among the groups inhabiting the Baltic islands and the surrounding mainland regions, as well as the interactions between them.

Everlasting Runes: a digital research platform for Sweden's runic inscriptions aims at increasing accessibility to the runic source material, with scholarly edited translations, maps and original documentation including previously unpublished photos and archival material. The project also includes a study of the use of runes on the Baltic islands of Öland, Gotland and Bornholm, and a comparison between these islands. The aim is to examine the relationships between these three 'runic' islands through the lens of interdisciplinary runic research, including runology, archaeology and scientific methods for documentation and analysis. Our aim with the seminar was to discuss our runic research in a wider perspective, and to consider issues such as identity, alliances and networks.

For Gotland Museum, co-hosting this meeting in our premises was a pleasure and a privilege. Gotland Museum has an explicit ambition to take an active role in research that concerns Gotland's history, and the island's relations to its Baltic neighbours. Therefore, participating in a meeting with two of the most exciting ongoing research projects concerned with the Iron Age in the Baltic – *The Viking Phenomenon* and *Everlasting Runes*, brings us where we want to be.

We found that we had many questions and research interests in common, which we wished to discuss with other scholars in a roundtable seminar. Through this, we sought to gain a new understanding of the field from the perspective of archaeology, runology and numismatics. We did not ask for finished studies, nor any final answers, but rather an open-minded conversation and discussion of interesting topics.

The general themes and questions of the workshop revolved around cultural similarities and differences between the islands of the Baltic, with a focus on Öland, Gotland and Bornholm, as well as the relations that existed between them. We also sought to explore island mentalities, the role that islands play as nodes of interaction and communication, and also to examine change and continuity in a long-term perspective. These themes are revisited in this book, discussed in light of current strands in archaeological research including insularity, network theory and the Viking diaspora.

The first theme, which centred on similarities and differences between the islands and the relationships between them, focused on material culture, language and the runic inscriptions from an archaeological perspective. Given that the islands were competitors in trade and warfare, did the inhabitants of these places choose to make cultural statements that expressed affiliation with or differentiation from each other? The second theme, 'island mentality,' touched on issues such as cultural development and change in comparison to surrounding mainland regions, the continuity of traditions as seen in late silver hoards, cemetery finds, and late rune stones, and re-inventions and re-interpretations of mainland traditions and practices. The third theme – 'islands as nodes of interaction and communication,' explored the role of the Baltic as a catalyst for social and economic change and expansion. This included discussions of emporia and ports of trade, beach markets and also numismatic perspectives on interaction. Finally, in considering the theme of change and continuity in long-term perspective, we discussed how cultural traditions develop over time, the innovation and preservation of knowledge, technology and expressions of political integration or independence.

The contributions in the book cover a wide spectrum of topics and approaches to both materials and questions. We want to acknowledge the importance of in-depth studies of specific archaeological materials

while at the same time stressing the need to situate these discussions within the broader context of cultural development and change in the Baltic. We also seek to highlight the importance of a multi-disciplinary perspective. The main aim of the workshop was therefore not to present concrete 'results' of various studies, but rather to promote an open and scholarly discussion, something that we hope is conveyed through the contributions in this book. Directly from the trench, Widerström shares his detailed observations from recent excavations in Visby, where there may be traces of a *Tuna* farm. Such sites are unusual on Gotland and they are also highly-relevant for our understanding of the origins and development of Visby. These observations also highlight the necessity of source criticism concerning, for example, dating methods and the results of archaeobotanical analyses. It also serves as a reminder of the hard work and difficult circumstances under which basic archaeological information is extracted from the soil.

In a discussion of trade and its relation to novelties and intellectual capacities, Kilger seeks to relate numismatic research to other topics in this volume, and to examine how the results of runic and numismatic research can serve to complement each other. As Kilger demonstrates, runes, trade and silver were deeply-interconnected within the context of long-distance exchange. It is likely that specialists were needed in this profession, and the trading communities of the Baltic may have provided the social and intellectual environment needed for the development of the short-twig runic system. Bogeviken on northern Gotland, for example, is shown to be rich in silver hoards and, according to Källström, it may have been a centre for runic knowledge.

Hedenstierna-Jonson and Ljungkvist delve into some of the social and political circumstances underpinning the very beginning of the Viking Age. The development of sailing technology and skills in navigation are evidently crucial, with Ljungkvist also suggesting that the desire to secure access to maritime resources may have even provided the grounds for seafarers to extend the range of their operations.

The concept of insularity is addressed from different perspectives by Papmehl-Dufay, Gustafsson and Raffield. Gustafsson argues that Gotland developed a range of unique cultural expressions not as a result of isolation, but rather due to the construction of a 'deliberate otherness' that was maintained in spite of its ample exposure to foreign

influences. Papmehl-Dufay similarly argues that the otherness of the large islands in the Baltic was actually symptomatic of their role as communicative nodes on a 'maritime highway.' Raffield from another, more anthropological perspective, discusses insularity as an aspect of in-group mentality, where it is important to define who belongs to the in-group and who does not.

A reoccurring theme among the contributions is the importance of innovation and the creation of new technologies and knowledge, both as a means of driving development (Ljungkvist, Hedenstierna-Jonson and Adamczyk) and also as a particular feature of island communities (Raffield, Kilger and Gustafsson). The role of the Baltic Sea in facilitating connectivity is also addressed, as it is suggested that the dynamics of the seascape itself may have functioned as a catalyst for development by facilitating interaction and cultural exchange between different groups. In this context islands could be seen as communicative nodes (Papmehl-Dufay), acting as 'front yards' rather than 'backwaters' (Kilger). From this perspective, Källström offers a detailed insight into the development of the short-twig runes, something that is often seen in connection with Viking trade routes and early towns. New discoveries suggest that the short-twig runes on Gotland may provide a clue to central dating issues in runology. Continuing with runes, Kitzler Åhfeldt investigates how the use of runes on the three islands differed. Struck by the pronounced differences in the range of objects upon which runic inscriptions were carved, she suggests that the islanders nourished different attitudes to runic script.

The ambivalent situation of Öland is discussed by Zachrisson, who examines the sometimes bewildering mixture of cultural influences on the island as a consequence of its precarious geographical situation in a contested border region between the Swedes and the Danes. This picture is further clarified by the strontium analyses from the Salme boat graves, which now have the potential to shed new light upon the boat grave in Nabberör on the northern coast of Öland.

Conflict and hostility also need to be addressed. From the recent excavations at the spectacular site of Sandby borg, it is clear that at least some parts of Öland were attacked during the Migration Period, perhaps even by Gotlanders (see Papmehl-Dufay). According to Kilger, the silver crisis of c. 875-900 might have represented another difficult

period when long-distance networks in Eastern Europe broke down. Despite this, Gotlandic merchants still managed to bring home silver. Adamczyk examines the changing nature of silver flows within the context of internecine warfare between local warlords in the eastern Baltic. He interprets the increasing number of hoards in Scandinavia and on Gotland as indicating that Scandinavians may have taken over some areas, perhaps through the use of violence. This topic is also touched upon by Hedenstierna-Jonson in her discussion of the boat graves from Salme. Developments take a turn once again at the beginning of the 11th century, when prevailing patterns in trade and exchange lead to the development of larger harbours on Gotland and the rise of Slavonic material culture in Danish and southern Swedish sites. Something also happens with the language on Bornholm at this time (Moltke 1976:279-280), which is similarly indicative of major changes in society. This period is a concern for Ljung, who investigates how islanders changed their burial customs and memorials. As mentioned above, all three islands (i.e. Öland, Gotland and Bornholm) have a lingering runestone tradition. As on Bornholm, the people of Öland and Gotland were slow and also perhaps reluctant to abandon their traditional burial grounds, not because they were less ardent in their faith but because the decentralised nature of island society did not provide an impetus for sweeping change.

To sum up, the questions posed and discussed during the workshop, which have been further developed in this book, have highlighted the complexity of developments and relations in the Baltic Sea region during the Viking Age. What emerges is an image of a number of islands united not by their shared sense of insularity, but rather by their efforts to construct and maintain individual identities in the face of intensive contact and cultural exchange. The archaeological and runic records bear witness to these efforts, and also hint at wider, more complex processes of social and political change that require further investigation.

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References

Moltke, E. 1976. *Runerne i Danmark og deres Oprindelse*. 1st ed. Copenhagen: Forum.

CHARLOTTE HEDENSTIERNA-JONSON

Entering the Viking Age through the Baltic

Introduction

The 8th century is generally regarded as the prelude to the Viking Age proper. The historical narrative of the Viking Age is commonly thought of as beginning at the time when raiding Scandinavians became visible in a western European context, mainly during the 9th and 10th centuries following the attack on Lindisfarne in 793 AD. This particular event has come to characterise the starting point for the Viking expansion and has even affected the perception of the geography of the Viking world. It is in every way a simplified and Anglocentric construction – something we are all aware of, but it becomes even more inadequate when considered from an eastern Scandinavian perspective.

Approaching the questions of how, when and why the Viking Age started are at the heart of the *Viking Phenomenon* research project (VR 2015-00466). The interactions and developments in the Baltic region during the century preceding the Viking Age, may well give new insights and a better understanding of this process. Although the Viking Age is a historical construct, the emergence of this phenomenon as such has left traces both in the archaeological and textual records. Raiding, expansion, urbanisation, trade and technical innovation are all features that have come to be considered as characteristic of Viking Age society. While these most likely represent the continuation of processes that had been underway for some time, the Viking Age is the period when these features become archaeologically and historical visible for the first time. This paper provides a reflection on the importance of the Baltic region for the development of what we characterise as the Viking Age. This is perhaps a more natural starting point considering that at the end of the 8th century, interactions along the Baltic coast had been going on for centuries.

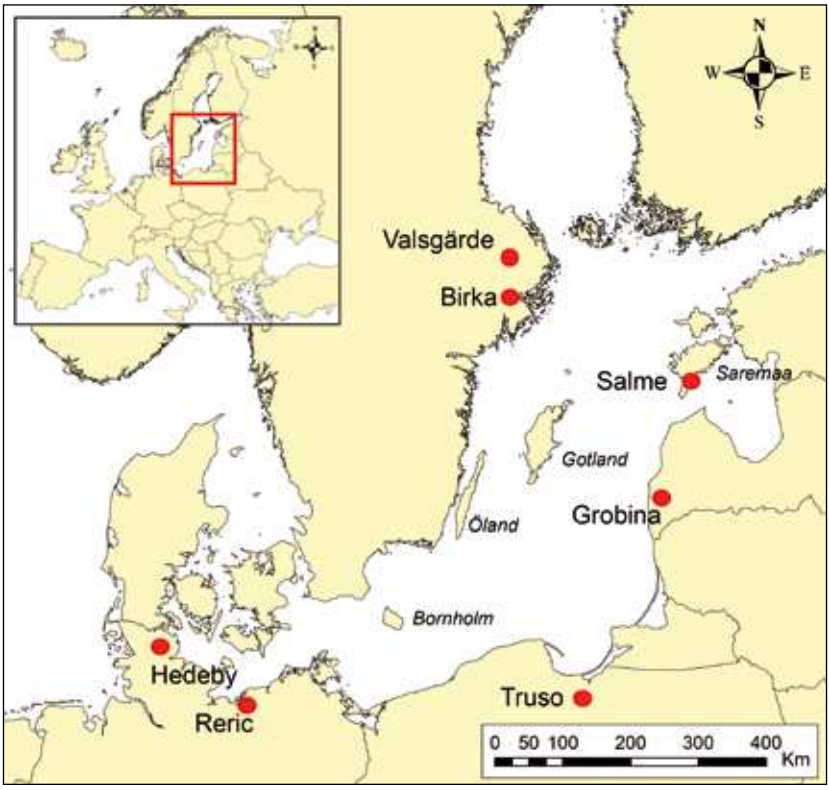


Fig 1. Map over the Baltic area with places named in the text marked out. Map by Laila Kitzler Åhfeldt, Swedish National Heritage Board.

An early raid

An intrinsic element of the Viking Age is overseas raiding. With the recent discovery of the spectacular boat burial site of Salme, the starting point for this development can be moved back in time. Around 750 AD, two boats were placed on the shore of the Estonian island of Saarema (Ösel). They contained over 40 men, many with evidence of sharp force trauma indicating a violent death. The equipment of the crew, including some 40 swords and other types of weaponry, were mainly of Scandinavian type, and recent strontium isotope analyses support an east Scandinavian origin for the expedition (Konsa et al. 2009; Peets et al. 2010; Peets et al. 2012; Price et al. 2016). The close parallels in burial custom and material culture between Salme and the boat burial cemetery of Valsgärde in Uppland, Sweden, suggests that

the crew members of the two boats were on their way from, or back to the Lake Mälaren region. The interpretation is further supported by isotopic data, though the conclusive report of the finds and contexts is a work in progress (Price et al. 2016) (Fig. 2).

The aim of the expedition is still a matter of speculation, but the condition of the skeletons and the quantity of weapons suggests a military campaign, raid or diplomatic mission. Did the event in fact mark the beginning of a new phase of interaction along the Baltic coast?

When the burial of the two boats on Saarema took place, there had been settlements with a strong Scandinavian presence, occasionally described as colonies, in the Eastern part of the Baltic for some time. Close to the Latvian coast and on the river Ālande, the modern town of Grobina holds the remains of a Late Iron Age complex with settlement areas, hillfort and several cemeteries. Though only partly excavated, the cemeteries are thought to include over 3 000 Scandinavian-style burials, as well as numerous graves of local Curonians.

Fig. 2. Reconstruction drawing of the boat burial Salme I, by Þórhallur Þráinsson, © Neil Price, with permission.

Less is known about the settlement area, but thick and dark cultural layers, a so-called "Black Earth" area, has been identified stretching along the river (Petrenko & Urtāns 1995:14f; Gustin 2004:60–62). The activities in the settlement area has so far been dated from the 8th to 9th centuries, contemporary with the Scandinavian burials. The activities included iron working, bronze casting, weaving and bone and antler crafts (Petrenko & Urtāns 1995:19). Despite the presence of crafts in the settlement area, prehistoric Grobina was mainly an agricultural society. It is perhaps for this reason that the site was not recognised as a townlike settlement, unlike Truso or Staraja Ladoga. Like these sites the population seems to have been rather mixed, but based on the graves, the Scandinavians were in the clear majority, which might account for the designation of the settlement as a colony (cf. Virse 2017).

New technology

There is another interesting feature in the Salme burial context that might be of particular importance, or even a prerequisite, for the Viking expansion: the introduction of the sail. Though the exact starting point for the use of sails in Scandinavia and the Baltic is not yet known, the first archaeological evidence of sailing boats, apart from imagery on picture stones, is provided by one of the two Salme boats. Its construction included a keel, which was needed for sailing, and fragments of textile that once covered the boat have been interpreted as the remains of sail cloth (Peets et al. 2013; Price et al. 2016). The Salme boat is contemporary with images of sailing boats on the Gotlandic picture stones. Though the starting point for the motif has proven difficult to fix, it recurrently appears as a prominent feature on picture stones in the 8th century (Oehrl 2019:24–25, 94), thus further underlining the impression of this relatively new technical development (Fig. 3).

It is easy to overlook just how demanding sail production was. It required extensive amounts of raw material that then had to be processed, spun and woven, a time-consuming task that engaged many people. The production of one piece of sail cloth measuring 25 m^2 is estimated

Fig. 3. Picture stone from Lillbjärs, Gotland.
Photo: Gabriel Hildebrand, Swedish History Museum.

to have taken one person two years of full-time work (Andersson Strand 2011:4). The cloth was then covered in tar and fitted with rope, both with their own processes of production (Hennius 2018; Sundström 2018; cf. Andersen et al. 1989). The making of sails constituted a technological advancement that required a new level of organisation and planning.

Advanced craft production and the emergence of towns

Although perhaps not a requirement for, but rather as a result of this innovative kind of complex and highly demanding crafts production, a new type of settlement started to appear in the Baltic. The mid-8th century introduced the emergence of town-like structures. These Viking towns had features that we recognise from medieval towns, but have been more strictly reclassified as proto-towns. Regardless of the definition, these settlements constituted something different from the surrounding rural area, the economy was essentially non-agricultural, and trade and crafts were the main activities (cf. Callmer 1994:51 and there cited references, Kalmring 2016; Hedenstierna-Jonson 2016).

Two well-known examples of these townlike structures were Birka in present day Sweden, a node on the western side of the Baltic, and Staraja Ladoga by Lake Ladoga in north-western Russia, which was connected to the Gulf of Finland via the Neva River. Both sites were established in the 750s, and from their founding already displayed the characteristics of a town. One recurring and possibly diagnostic feature of these sites is the presence of advanced and complex production processes. Staraja Ladoga was, for example, the first site known to include more advanced forms of iron production on the Eastern side of the Baltic and the textile production in Birka was unparalleled in the surrounding region (Peets 1995; 2003; Andersson 2003; Callmer 2003; Sindbæk 2017; Andersson Strand & Heller 2017; Hedenstierna-Jonson in print [2020]). Both types of crafts included the import of raw materials as well as a complex production process that required various skills, perhaps even several craftsmen. Production took time and preparation, and a certain level of continuity in order to acquire material, produce and supply potential consumers. The production of sails is a good example of this.

But it was not only the Viking world that saw the emergence of towns. As discussed by Adamczyk in this volume, the South coast of the Baltic saw a similar development. On the southern coast, sites like Truso/Elblag in present day Poland and Reric/Groβ Strömkendorf in the German state of Mecklenburg-Vorpommern, emerged at approximately the same time as Birka and Staraja Ladoga (cf. Müller-Wille 2002; Messal 2017 and there cited references).

The population within these sites was mixed, probably with variations in composition, but with a relatively small portion of locals compared to other types of settlements. As summarised by Adamczyk, it was the long-distance and cross-continental trading contacts that connected them. Archaeologically these connections are visible in the material culture, which comprises objects with varying places of origin, reflecting the heterogenous character of the population. There are also shared social and religious practices, including the emergence of new forms of practices that seem to be an outcome of the urban-like environment and long-distance networks of communication and interaction. The towns constituted a vibrant and dynamic social environment, as discussed by Kilger in this volume, and were milieus where new ideas and knowledge developed (e.g. the first appearance of the younger futhark in the 8th century Viking town of Ribe, see Kilger in this volume).

However, recent genetic and isotopic studies indicate that the archaeological material only provides part of a complex picture (e.g. Krzewinská et al.2018; Arcini 2018; Hedenstierna-Jonson et al., in print [2020]). Rural sites in general had a more homogeneous and local population compared to the urban-like sites. But while differences in the composition of rural and urban populations would be expected, the studies have also shown that there are variations between the so-called urban-like sites, indicating differences in structure and function. The results indicate that the composition of a population could be a key feature when determining the character of the site, separating the truly urban settlements from other central places and market spaces.

The particulars of the Baltic Sea – land, coast and water

The land areas surrounding the Baltic were not countries in any modern sense, but there was a political geography of sorts. It included regions defined by the people who inhabited them, but also areas connected to

powerful political entities or even early kingdoms. An insight into the situation in the Western Baltic is given by the accounts of Wulfstan, travelling from Hedeby to Truso in the 9th century:

> "Wulfstan said that he travelled from the Heaths [Hedeby], that he was in Truso in seven days and nights, that the boat was all the way running under sail. Wendland was on his starboard side, and on his port side were Langeland and Lolland and Falster and Skåne, and these lands are all subject to Denmark. And then the land of the Burgendas [Bornholm] was on our port side and they have their own king. Then after the land of the Burgendas there were on our port side these lands, which are called first island of the people of Blekinge and Möre and Öland and Gotland, and these lands are subject to the Svear. And Wendland was on our starboard side all the way to the mouth of Vistula." (Wulfstan's Voyage).

Although Wulfstan's description is very general, it was clearly important to recount the relation between geographical regions and political powers. His travelogue gives one of the earliest mentions of what will develop into the Nordic countries of Denmark and Sweden.

One of the characteristics of the Baltic Sea is its multitude of islands. Though many of them are barren and unpopulated, others provide a thriving outland, inhabited and used for their resources, e.g. seal, fish and sea birds. The waters of the Baltic Sea were relatively calm compared to those of the North Atlantic, serving to connect, rather than divide the region. The greatest challenge was instead to navigate the partially shallow waters and archipelagos of the coastal regions. Unlike crossing an open water where routes could be set according to geographical directions, the sailing routes in the Baltic were complex pathways that had to be remembered and mediated through the possible use of pilots or local guides – a research strand worthy of further study.

Bornholm, Öland and Gotland, already mentioned by Wulfstan, as well as Saarema and Åland constitute some of the great islands of the Baltic Sea. Nowhere is the link-up of the Baltic more present than on these islands. While they present objects and influences that reflect contacts and interactions they all, in their different ways, also devel-

oped a characteristic culture of their own, with particular dress, housing, ways of living, and ways of burying their dead. (cf. Gustafsson, Raffield this volume).

The Baltic as a framework for the emergence of the Viking Age

The emergence of the Viking Age could be seen as a development of a new level of social organisation that enabled progress, innovation and expansion on a different scale. Already existing structures, networks and activities were enlarged, contacts intensified and new regions were explored. Viking cultural expression and social practice included elements that can be identified over vast geographical areas and over a millennium later. Local and regional practices and styles also flourished, incorporating parts of a general Baltic culture but also administering them in their own particular way. Most, if not all, of the features that could be seen as diagnostic for this development are visible in the Baltic Sea region during the 8th century: raiding, technical development of sails and sailing vessels, the emergence of new social structures and sites as well as administered trade and relatively regular expeditions along long distance trade routes.

The Baltic was a maritime landscape characterised by communication and connection, with landing sites, safe harbours, and sites for trade and the re-loading of merchandise into smaller boats for further transport inland. In some places all of these features came together, and ports of trade developed. Whereas Grobina, with its settlement and cemeteries, testifies to long-term contacts between the eastern and western shores of the Baltic, the spectacular discovery of the two ship burials from Salme provides a snapshot of a single event that captures both the movement and inherent violence of the period.

Birka and Staraja Ladoga were perhaps not the first settlements incorporating trade and crafts at a more advanced level, but they display these features in new ways. The development of these town-like structures also marks the archaeologically-confirmed start for a more established crafts and trading network that connected Scandinavia and the Baltic with the regions further east. Crossing the Baltic was the first step towards exploring and expanding into the unchartered territories that connected the European North with established routes and centres for trade in Europe and beyond.

The Baltic Sea region provides a lens through which to study the social and technological changes that emerged before and after the beginning of the Viking Age, thus creating a framework for discussing possible underlying factors and driving forces. It is even possible that the particular conditions of the Baltic acted as a catalyst for social and economic change and expansion, as suggested by Adamczyk in this volume. Viking Age Scandinavians were just one group of actors in the region. Equal parts were played by Baltic, Finnish and West-Slavonic societies, possibly creating a special kind of dynamic in the seascape that the Baltic created.

References

Andersen, E., Milland, J. & Myhre, E. 1989. *Uldsejl i 1000 år*. Roskilde: Vikingeskibshallen.

Andersson Strand, E. 2011. Tools and Textiles – Production and Organisation in Birka and Hedeby. In: *Viking Settlements & Viking Society*, S. Sigmundsson (ed.). Reykjavik: University of Iceland Press, pp. 1–17.

Andersson, E. 2003. *Tools for textile production from Birka and Hedeby: excavations in the Black Earth* 1990–1995. Birka Studies 8. Stockholm: Riksantikvarieämbetet.

Andersson Strand, E. & Heller, S-G. 2017. Product and Distribution. In: *A Cultural History of Dress and Fashion in the Medieval Age*, S-G. Heller (ed.). London: Bloomsbury, pp. 29–52.

Arcini, C. & Price, D. T. 2018. *The Viking Age – a time of many faces*. Oxford: Oxbow Books.

Callmer, J. 1994. Urbanization in Scandinavia and the Baltic Region c. AD 700–1100: Trading Places, Centres and Early Urban Sites. In: *Developments Around the Baltic and the North Sea in the Viking Age,* B. Ambrosiani & H. Clarke (eds.). Birka Studies 3. Stockholm: Birka Project, Riksantikvarieämbetet och Statens historiska museer, pp. 50–90.

Callmer, J. 2003. Wayland. An Essay on Craft Production in the Early and High Middle Ages in Scandinavia. In: *Centrality – Regionality. The Social Strucutre of Southern Sweden During the Iron Age*, L. Larsson & B. Hårdh (eds.). Uppåkrastudier 7. Lund: Almqvist & Wiksell, pp. 337–361.

Gustin, I. 2004. *Mellan gåva och marknad*. Lund studies in medieval archaeology 34. Lund: Almqvist & Wiksell International.

Hedenstierna-Jonson, C. 2016. Spaces and places of the urban settlement of Birka. In: *New Aspects on Viking Age Urbanism, c.* 750–1100, L. Holmquist, S. Kalmring & C. Hedenstierna-Jonson (eds.). Stockholm: Archaeological Research Laboratory, Stockholm University, pp. 16–27.

Hedenstierna-Jonson, C. in print [2020]. Interactions and infrastructure – on the driving forces and organisation behind the Viking Age networks of

trade in the Baltic and beyond. In: *Iron and the transformation of society*, Stockholm: Jernkontoret.

Hedenstierna-Jonson, C., Linderholm, A. & Kjellström, A. in print [2020]. Viking mobility in the Baltic Sea region. Viking Congress 2017 proceedings.

Hennius, A. 2018. Viking Age tar production and outland exploitation. *Antiquity* Vol. 92, Issue 365, pp. 1349–1361.

Kalmring, S. 2016. Early northern towns as special economic zones. In: *New Aspects on Viking-age Urbanism, c. 750–1100*, L. Holmquist, S. Kalmring & C. Hedenstierna-Jonson (eds.). Stockholm: Archaeological Research Laboratory, Stockholm University, pp. 7–15.

Konsa, M., Allmäe, R., Maldre, L. & Vassiljev, J. 2009. Rescue excavations of a Vendel Era boat-grave in Salme, Saaremaa. *Archaeological Fieldwork in Estonia* 2009, pp. 213–222.

Krzewińska M., Kjellström A., Günther T., Hedenstierna-Jonson C., Zachrisson T., Omrak A., Yaka R., Merve Kılınç G., Somel M., Sobrado V., Evans J., Knipper C., Jakobsson M., Storå J., Götherström A. 2018. Genomic and strontium isotope variation reveal immigration patterns in a Viking Age town. *Current Biology* 28, pp. 1–9.

Messal, S. 2017. Skandinavische Kolonien an der südlichen Ostseeküste? Zur Siedlungsgenese der früh- und hochmittlealterlichen Emporien im südlichen Ostseeraum. In: *Häfen im 1. Millenium AD. Standortbedingungen, Entwicklungsmodelle und ökonomische Vernetzung*, S. Kalmring & L. Werther (eds.). RGZM – Tagungen Band 31. Mainz: Verlag des Römisch-Germanischen Zentralmuseums, pp. 11–126.

Müller-Wille, M. 2002. *Frühstädtische Zentren der Wikingerzeit und ihr Hinterland, die Beispiele Ribe, Hedeby und Reric*. Stuttgart: Steiner.

Oehrl, S. 2019. *Die Bildsteine Gotlands. Probleme und neue Wege ihrer Dokumentation, Lesung und Deutung.* Studia archaeologiae medii aevi 3. Friedberg: LIKIAS.

Peets, J. 1995. Die vielschichtige Schmiedetechnik in der Herstellung von Klingen für Schneidegeräte im 1.-14. Jahrhundert n. Chr. In: *Archaeology east and west of the Baltic*, I Jansson (ed.). Stockholm: Dept. of Archaeology, Stockholm University, pp. 71–78.

Peets, J. 2003. *The power of iron. Iron production and blacksmithy in Estonia and neighbouring areas in prehistoric period and the Middle Ages*. Tallinn: Ajaloo instituut, Tartu ülikool/Tartu University.

Peets, J., Allmäe, R. & Maldre, L. 2010. Archaeological investigations of pre-Viking Age burial boat in Salme village at Saaremaa. *Archaeological Fieldwork in Estonia* 2010, pp. 29–48.

Peets, J., Allmäe, R. & Maldre, L. 2012. Research results of the Salme ship burials in 2011–2012. *Archaeological Fieldwork in Estonia* 2012, pp. 43–60.

Peets, J., Allmäe, R., Maldre, L., Saage, R., Tomek, T. & Lõugas, L. 2013. Research results of the Salme ship burials in 2011–2012. *Arheoloogilised välitööd Eestis/Archeological fieldwork in Estonia* 2012, pp. 43–60.

Petrenko, V. & Urtāns, J. 1995. *The Archaeological Monuments of Grobiņa*. Stockholm & Riga: Museum of National Antiquities (Statens historiska museum).

Price, T. D., Peets, J., Allmäe, Maldre, L. & Oras, E. 2016. Isotopic provenancing of the Salme ship burials in Pre-Viking Age Estonia. *Antiquity*, Volume 90, Issue 352, August 2016, pp. 1022–1037.

Sindbæk, S. 2017. A Site of Intersection: Staraja Ladoga, Eastern Silver, and Long-Distance Communication Networks in Early Medieval Europe. In: *Identity Formation and Diversity in the Early Medieval Baltic and Beyond. Communicators and Communication*, J. Callmer, I. Gustin & M. Roslund (eds.). Leiden & Boston: Brill, pp. 76–90.

Sundström, A. 2018. Birkas segel. In: *Birkas skepp*, J. Hansson, D. Harrison, C. Hedenstierna-Jonson, K. Helmerson, J. Lindström, T. Magnusson & A. Sundström. Sjöhistoriskas årsbok 2018–2019. Stockholm: Medströms förlag, pp. 129–149.

Virse, I. L. 2017. Grobina (Latvia): dwelling site of Scandinavians and Curonians. In: *Interaction without borders. Exemplary archaeological research at the beginning of the 21st century*, B. V. Eriksen, A. Abegg-Wigg, R. Bleile & U. Ickerodt (eds.). Schleswig: Stiftung Schleswig-Holsteinische Landesmuseen, pp. 683–689.

Wulfstan's Voyage. Cited from: *Wulfstan's Voyage and his Description of Estland: The Text and the Language of the Text.* J. Bately (ed.). 2009. In: *Wulfstan's Voyage. The Baltic Sea Region in the Early Viking Age as seen from Shipboard*, A. Englert & A. Trakadas (eds.). Roskilde: Viking Ship Museum, pp. 14–28.

JOHN LJUNGKVIST

A maritime culture

Introduction

It is not uncommon to describe Vikings as people who lived in a primitive society that "suddenly" began exploring the world during the late 8th century, as they took on sea voyages that eventually transported them as far as Newfoundland in North America and to the Black Sea in the east (see for example Diamond 2011). Travelling across water, however, was nothing new for Scandinavians. Baltic Islands such as Gotland, located nearly 85 kilometres from the nearest shores, were colonised more than 9 000 years ago, and fleets from southern Denmark took part in the Anglo-Saxon migrations to England almost 400 years before the first Viking raids.

The importance of maritime life, contacts and economies have been constant throughout the history of Scandinavia. The main difference between the Viking ocean travellers and their ancestors is that the former took the step to make extraordinarily long travels. Why they started those longer journeys is a matter of debate, but we do know that the story began centuries before the Viking Age.

Today, most people live in an urbanised environment where the maritime world is primarily a recreation area. We may find it hard to grasp the importance of the sea, lakes and river landscapes for early humans. Most of these landscapes have been completely transformed by humans since the Middle Ages. Most rivers today are blocked by dams and many lakes and wetlands have been drained in order to create more farmland or plantations for forests. Overfishing has resulted in degraded eco-systems. Damming the rivers in Europe began during the Middle Ages, which meant that the economy based on migrating fish such as salmon began to shrink and many riverine communication routes were cut off. This riverine culture of the Vikings and their ancestors has been largely forgotten. The Valsgärde boat burials reminds us of a boat culture that disappeared completely when four mill dams were constructed between Valsgärde and the big lake systems of the Mälar Valley during the Middle Ages, making boat travel far more problematic.

The existence of free flowing rivers in a watery landscape means that the border between the coast and the interior was vague. All people living by rivers or lakes had boats and could easily move from the rivers to the lake systems and the coast. These waters also represented a diverse and rich food source, as far more fish migrated from the seas up along the rivers and an abundance of birds foraged in the wetlands.

When travelling along the Scandinavian coast, one observes huge regional variation in the nature of the landscape and maritime ecosystems. The Norwegian coastline is high and rocky and exposed to the cold, brutal conditions of the North Atlantic. Its northernmost parts have an arctic climate. These regions were inhabited by the ancestors of the Sami, whose way of life was comparable with the life of native groups in Newfoundland, while southern Norway has more in common with the climate and nature of Scotland. The coast of Denmark constitutes low and less dramatic island landscapes that are linked to the coast of Northern Germany, the Netherlands and of course Sweden. In contrast to Denmark and Norway, which are highly and entirely exposed towards the Atlantic, most of the modern Swedish landmass is linked to the Baltic Sea. Life in these brackish waters is different, and the communities that inhabited this region possessed access to the Russian river systems. These represented a northern gateway to the Black Sea, the Byzantine Empire and the Arab Caliphates.

The aristocrats interred within the Valsgärde boat burials were not only related to the maritime landscape via their boats. The watery world affected both the ordinary and dramatic parts of life. It seems like fish was seen as a high-quality food, as various species are found in rich burials and fishing was perhaps even considered a sport. But there is even more evidence of bird hunting. Aristocrats used a range of birds for different hunting purposes. Eagle owls were used as decoys to trap birds, goose hawks for hunting prey on the ground, and peregrine falcons to catch birds in the sky (Vretemark 2013). The graves also contained some of the hunted species such as ducks, geese and even swans and cranes (Sten & Vretemark 1988:150). Analyses of Viking Age skeletons reveal that the boat grave people lived far more on food from the lakes and rivers than we have previously thought. They saved as much as they could of meat producing animals and tried to catch as much as possible from the maritime world (Kjellström et al. 2016:369).

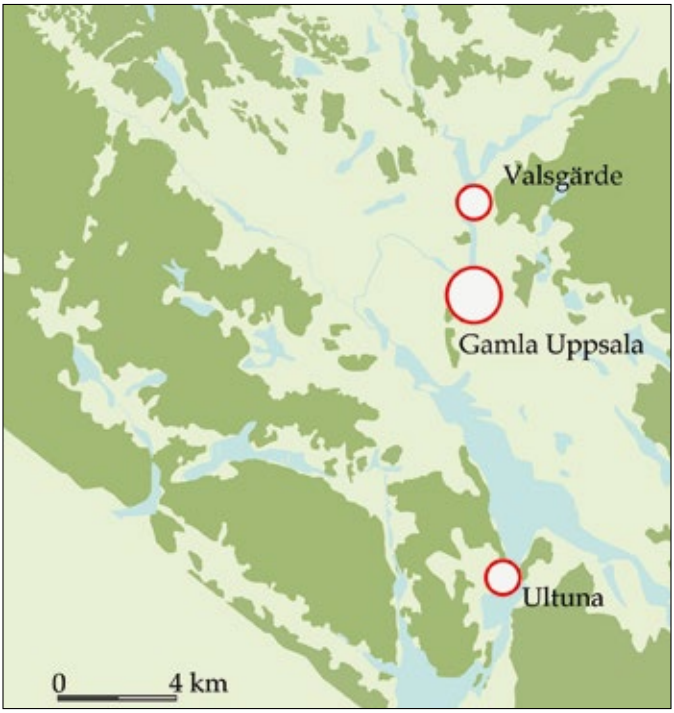


Fig 1. The lost maritime landscape around Uppsala with estimated water levels c 500 AD, based on data from Det medeltida Sverige (DMS) and Sveriges geologiska undersökning (SGU). Map: © John Ljungkvist.

Viking ships and boats are perhaps the most characteristic symbols of this period. The size and construction of the vessels varied enormously. Boats in general were common and probably owned and used by everyone who lived near the water. Some were only a few metres long and used for everyday fishing trips, while the Valsgärde boats could transport up to a dozen people along rivers, across lakes, and through archipelagos (Larsson 2007:57ff.).

The oldest boat type, which was still used in the Viking age, was the log boat that was made from a hollowed out tree trunk. Already in the Bronze Age, however, experiments with lighter plank built boats began, resulting in the emergence of true clinker-built boats more than 400 years before the beginning of the Viking Age (Rieck & Crumlin-Pedersen 1988:91ff.). This boat building technique is the most characteristic type for the North Sea and the Baltic regions. It means

that the edges of hull planks overlap each other and the strakes, and that the ribs were attached to the hull in a completely different way than they were to ships in the Mediterranean.

All the Valsgärde boats were built in the clinker technique but unfortunately almost all of the wood has disintegrated. The iron rivets that once joined the hull planks, however, were found still lying in their original position. This means that it is possible to reconstruct the size and shape of the boat and to study the different characteristics of the rivets and iron details, thereby allowing researchers to identify the specific types of timbers used and their size (see for example Bill 2018).

The boats from Valsgärde are up to 12 metres long. As such, they were not particularly large vessels. The main reason for this is that Valsgärde lies within a river system that was not navigable by larger vessels. Experiments have shown that the boats could be used to navigate the Baltic Sea in good weather, but they were primarily used for travels in shallower and calmer waters.

The remains of large pre-Viking Age ships have up until recently been few. Small parts of vessels have been found on beaches and numerous boat houses for large boats are known from Norway. Two boat houses, one of which could house vessels more than 20 metres in length, have recently been found in Nyköping, just 140 kilometres south of Valsgärde (Westberg 2015). Another boat find on a burial ground in Ultuna, placed on a good harbour site 12 kilometres south of Valsgärde, show that there were boats that were considerably larger than those from the boat burials (Almgren 1905; Ljungkvist 2006:178-181. Another recent discovery includes the Salme boat burials from Saaremaa, Estonia. Finds from the burials demonstrate a close connection to the Valsgärde burials, and also provide new insights into the early use of sail technology (see below). This demonstrates that quite large vessels were used in the Baltic before the Viking Age.

It has been highly disputed when Scandinavians started to use sails. This important technical innovation is not necessary for a maritime society and it would have had little impacts on coastal and riverine travel. The use of sails, however, does make it possible to cross oceans. This meant that large vessels could suddenly be manned by far fewer people, and it also made it possible for rowers to rest while the ship was transported by the winds.

Before the Viking Age, sails had been used in western Europe for at least 1000 years, by Carthaginians, Romans and Greek travelers. But importantly, sails were also used well before 0 AD by people in Britain and Brittany, which means that Scandinavians saw and interacted with sailing people. It seems, however, like the Scandinavians took much longer to adopt sailing technology (Cunliffe 2017). The debate concerning the date when sails were first used in the region has yet to be resolved. There is no good evidence for sails before 500 AD, but 300 years later it is apparent that the Scandinavians were master sailors. The motif of the ship had become a central feature of Scandinavian life, as represented frequently on coins, on picture stones from the island of Gotland, and of course in magnificent ship burials such as those from Oseberg and Gokstad in Norway. But when did this transition take place?

There are some well-documented remains of boats, not only from boat burials but also Danish finds such as the Kångsgårde ship, and the Grestedbro ship, where vessels over 20 metres long and dating from the 7th century have been found (Rieck & Crumlin-Pedersen 1988:133ff). It cannot be said for certain whether any of these vessels

Fig 2. Boat burial 8 from Valsgärde. Drawing by Allan Fridell, © Museum Gustavianum, Uppsala University.

were made for sailing – they are either poorly preserved or exist only as fragments. On basis of the many dozens of picture stones from Gotland that portray sailing ships, however, it seems likely that the use of these had become frequent by the late 8th century (Lindqvist 1941). This suggestion has been recently confirmed by the two spectacular mass burials of warriors found at Salme (Konsa et al. 2009; Peets et al. 2013; Price et al. 2016). The larger of the two vessels seems to have been a sailing ship, so it is likely that the Scandinavians had probably been practising their sailing skills for at least 50 years before they began exploring the Atlantic Ocean (Price et al. 2016; Peets et al. 2013). Travelling across the sea was seen as an adventure that was worthy of being mentioned in dramatic stories even before the Viking Age. Beowulf – a Geat who took his companions on a sea voyage to help the Dansh king Hrothgar, who at this time was being terrorised by the monster Grendel, is the most famous hero of this era:

> Men climbed eagerly up the gangplank,
> Sand churned in surf, shining war-gear
> In the vessel's hold, then heaved out,
> Away with a will in their wood-wreathed ship.
> Over the waves, with the wind behind her
> And foam at her neck, she flew like a bird
> Until her curved prow had covered the distance
> And on the following day, at the due hour,
> Those seafarers sighted land,
> Sunlit cliffs, sheer crags
> (*Beowulf* [2000]:17, translation by Seamus Heaney)

This poem reveals the relationship between travel, adventure and the notable deeds that connected the world of Beowulf to the Valsgärde burials. The earliest of these graves represent the beginning of a new era starting in around 550 AD. Not only were boats, which were very expensive and time consuming to construct, being used as burial vessels, but iron was being used and produced in much higher quantities. People were travelling into the forests to produce large volumes of tar for waterproofing boats and making them resistant against rot. It is also an era in which new types of tools emerge. The most important among these was the bearded axe that enabled craftsmen to produce

planks in a much faster way. In short, these changes provide evidence for a growing level of infrastructure that allowed communities to produce more and better ships (Hennius 2018).

It is also in this era that we see the increasing exploitation of maritime resources. There was no fishing industry comparable with the great herring and cod trade that emerged later (Barrett 2019). Some people along the coasts specialised in seal and bird hunting. Seal blubber was used to produce oil and feathers, especially from eider, was in high demand for use in pillows. Feathers have for example been found in the Valsgärde boat burials. In the most northern parts of Norway, communities of Sami and Norse-speaking peoples lived side by side. These were the Scandinavian equivalent of the 19th century fishermen in Newfoundland. Some of their income came from hunting seals and birds but also much bigger prey including walruses and probably even whales such as the now-almost extinct Northern Right Whale. This is probably the earliest known industrial fishing in Scandinavia. Archaeologists have found hundreds of large oil production pits where the blubber of seals and whales was cooked (Nilsen 2014). Baleens from whales were used as an equivalent of nylon ropes to fasten parts of the ships and products of walrus ivory and whale bone were used as luxury items over vast areas (Hennius et al. 2018). The evidence for this exploitation of Atlantic waters is very evident at Valsgärde as the boat burials contain hundreds of whale bone gaming pieces. The occurrence of whale bone gaming pieces seems to decline when the Viking Age begin. One might ask if this indicate that some resources, especially walrus, but also whales, had already been over-exploited along the Scandinavian coast by the Viking Age. The allure of new hunting grounds might have forced hunting groups to sail further away, towards Siberia in the East and eventually Iceland in the west (Bately 2007; Frei et al. 2015).

References

Almgren, O. 1905. En egendomling båtgraf vid Ulltuna. *KVHAAs månadsblad* 1900–1905, pp. 147–162.

Barrett, J.H. 2019. An environmental (pre)history of European fishing: past and future archaeological contributions to sustainable fisheries. *Journal of Fish Biology*. Volume 94, Issue 6, pp. 1033–1044.

Bately, J. 2007. Text and translation. In: *Ohthere's voyages: a late 9th-century account of voyages along the coasts of Norway and Denmark and its cultural context*, J. Bately & A. Englert (eds.).

Roskilde: The Viking Ship Museum, pp. 40–50.
Bill, J. 2018. The boat. In: *Valsgärde 14*, E. Nordahl: Uppsala: Uppsala universitet, pp. 69-87.
Cunliffe, B. W. 2017. *On the Ocean –The Mediterranean and the Atlantic from prehistory to AD 1500*. Oxford: Oxford University Press.
Diamond, J. 2011. *Collapse – How societies choose to fail or succeed*. New York: Penguin.
Frei, K. M, Coutu, A. N. Smiarowski, K., Harrison, R., Madsen, C. K., Arneborg, J., Frei, R., Guðmundsson, G.,Sindbæk, S. M., Woollett, J., Hartman, S., Hicks, M. & McGovern, T. H., 2015. Was it for walrus? Viking Age settlement and medieval walrus ivory trade in Iceland and Greenland. *World Archaeology* Vol. 47(3), pp. 439–466.
Beowulf. Cited from: *Beowulf: a New Verse Translation*, bilingual. Transl. S. Heaney. London: Norton, 2001.
Hennius, A. 2018. Viking Age tar production and outland exploitation. *Antiquity* 92, Issue 365, pp. 1349–1361.
Hennius, A., Gustavsson, R., Ljungkvist, J., Spindler, L. 2018. Whalebone Gaming Pieces: Aspects of Marine Mammal Exploitation in Vendel. *European Journal of Archaeology,* Volume 21, Issue 4, November 2018, pp. 612–631.
Kjellström, A., Prata, S. & Sjöling, E. 2016. Människornas liv. In: *Människor kring Gnistahögen – Begravningar från vendeltid, vikingatid och tidig medeltid,* A. Hennius, E. Sjöling, S. Prata (eds.). Upplandsmuseets rapporter 2016: 02. Uppsala: Upplandsmuseet, pp. 362–371.
Konsa, M., Vassiljev, J., Allmäe, R. & Maldre, L. 2009. Rescue excavations of a Vendel-era boat-grave in Salme, Saaremaa. In: *Archaeological fieldwork in Estonia* 2008, E. Oras & E. Russow (eds.), pp. 53–64.
Larsson, G. 2007. *Ship and society. Maritime ideology in Late Iron Age Sweden*. Aun 37. Uppsala: Uppsala universitet.
Ljungkvist, J. 2006. *En hiar atti rikr: om elit, struktur och ekonomi kring Uppsala och Mälaren under yngre järnålder*. Aun 34. Uppsala: Uppsala universitet.
Lindqvist, S. 1941. *Gotlands Bildsteine 1.* Stockholm: Wahlström & Widstrand.
Nilsen, R. A. 2014. *Den Nordlige Jernalder: Kulturminner og funn fra Malangen till Loppa*. Tromsö: Nord-Troms Museum/ UiT Norges Arktiske Universitet.
Peets, J., Allmäe, R., Maldre, L., Saage, R., Tomek, T. & Lõugas, L. 2013. Research results of the Salme ship burials in 2011–2012. *Arheoloogilised välitööd Eestis/Archeological fieldwork in Estonia* 2012, pp. 43–60.
Price, T., Peets, J., Raili Allmäe, R. & Maldre, L. 2016. Isotopic provenancing of the Salme ship burials in Pre-Viking Age Estonia. *Antiquity* 90, Issue 352, August 2016, pp. 1022–1037.
Rieck, F. & Crumlin-Pedersen, O. 1988. *Både fra Danmarks Oldtid*. Roskilde: Vikingskibshallen.
Sten, S. & Vretemark, M. 1988. Storgravsprojektet – osteologiska analyser av yngre järnålderns benrika brandgravar. *Fornvännen* 83, pp. 145–156.
Vretemark, M., 2013. The Vendel Period royal follower's grave at Swedish Rickeby as starting point for reflections about falconry in Northern Europe. In: *Hunting in northern Europe until 1500 AD: old traditions and regional developments, continental sources and continental influences: papers presented at a workshop organized by the Centre for Baltic and Scandinavian Archaeology (ZBSA), Schleswig, June 16th and 17th, 2011*, O. Grimm & U. Schmölke (eds.). Neumünster: Wachholtz, pp. 379–386.
Westberg, T. 2015. Naust – The boathouses of Nyköping and the echoes of power. *Meta* 2015, pp. 173–191.

BEN RAFFIELD

No one is an island: in-group identities in the Viking Age Baltic

Introduction

The Baltic Sea can be considered, in many respects, to be the centre of the Viking world. Throughout the Viking Age (c. 750–1050 AD), people, trade goods, and ideas flowed into its waters from regions as far removed as the British Isles, the Byzantine Empire and the territories of the Turkic tribes that inhabited the Eurasian Steppe. Merchants and pirates ploughed the waves in search of profit and prey, while major Baltic emporia such as Hedeby, Birka, and Truso rose to prominence as nodal centres of trade and communication.

The Relations and Runes workshop provided scholars working within two projects – *Everlasting Runes* and *The Viking Phenomenon* – with the opportunity to discuss the relationships that existed not only between the islands of the Baltic Sea, but also between these and the societies of the wider Viking world. In this short paper, I will briefly reflect on the psychological mechanisms that underpin the construction and maintenance of in-group identities, and how the study of group formation, communal identification, and collective action might help us to better understand broader processes of social and political development in island environments. I should stress that I am no expert in Baltic archaeology, and as such this paper will not offer any new insights on the material culture of the Baltic islands. Rather, my intention is to draw attention to what I feel is a promising line of enquiry, which might help scholars to better understand the reasons underpinning the creation of the material that constitutes the archaeological record itself.

Island communities are often described as possessing idiosyncratic identities that manifest, for example, in burial assemblages and ritual practices (Wallin & Martinsson-Wallin 2016), new technologies (Hudson 2012), and through linguistics and storytelling (Gounder 2015). Since the latter half of the 20th century, islands have often been

considered by archaeologists as 'laboratories' for the study of cultural change (e.g. Evans 1973; see also Papmehl-Dufay, this volume), the implication being that island cultures have somehow emerged and evolved in relative isolation from the outside world. Of course, this has not been the case, and more recent years have seen a move towards the study of hybridity and cultural interaction within island environments, processes which themselves may have been facilitated by the very maritime environment that was once perceived to separate islands from the wider world (Boomert & Bright 2001; Baldacchino 2003; Spriggs 2008). While seemingly contradictory, the physical separation of island communities from those on the mainland may in fact serve to increase the potential for cultural interaction due to the ease of access provided by maritime transport. This acute awareness of the outside world has, for example, been argued to have precipitated the development of the distinctive Neolithic megalithic 'temples' that can be found on Malta (Robb 2001). These monuments reflect an active and knowledgable disassociation from mainland and other island cultures that was driven by extensive contact with the outside world. In the Viking Age Baltic, obvious examples of both idiosyncracy and hybridisation can similarly be seen, for example, in the unique tradition of raising picture stones that emerged on Gotland during the first millennium. But why do these forms of material culture develop, and how did they reflect the complex identities of island communities?

A sense of belonging: in-group and out-group identities

The formation of collective identities is directly linked to the dynamic psychological and social mechanisms that support group formation and intra-group cooperation, processes which have long-been a topic of interest for scholars working in a range of disciplines including anthropology (e.g. Whitehouse 1996; Gil-White 2001; Whitehouse & Lanman 2014; Jong et al. 2015). Archaeologists, however, have been much slower to explore these phenomena despite major theoretical shifts towards the study of agency and identity over the last thirty years (e.g. Jones 1997; Franklin & Fesler 1999; Díaz-Andreu et al. 2005; Insoll 2007). The reasons for this diffidence are unclear, but it may reflect a hesitation to engage with scientific research that may be perceived as overly-reductionist, or a desire to avoid speculating on ques-

tions that cannot be answered satisfactorily given that we will never be able to *know* how people living in the past thought or felt (Creese 2016; Raffield et al. 2017). Studying the psychological processes that underpin the formation and construction of group identities, however, can help us to better understand how both individuals and groups conceptualised the world around them, and perhaps to gain some tentative insights into past minds.

Human beings are ultrasocial in that they form highly-cooperative bonds with others with whom they share no genetic relationships (Garcia & De Monte 2012; Tomasello 2014). From an evolutionary perspective this can bring many benefits, ranging from increased protection from aggressors to the increased ability of groups to gather and manage resources (Javarone & Marinazzo 2017). These relationships, however, are also inherently unstable, as they rely on individuals suppressing their self-interests in order to fulfil the objectives of their group (Fowler 2016). Many groups make both conscious and unconscious decisions to express and assert a collective identity. Some choose to assert their kinship links or ethnic identity as a means of distinguishing themselves from others around them, while others emphasise the importance of cultural traditions and clothing styles, cuisine and diet, social behaviours such as singing and dancing, access to and possession of certain types of knowledge (which perhaps, in this case, might include that of runic script), and religious beliefs or customs (Korostelina 2007). Some groups – known as 'in-groups' – adopt specific combinations of identifiers in order to identify themselves as a discrete entity (Tajfel et al. 1971; Tajfel 1981; Turner 1985). Modern day examples of in-groups might include coworkers, members of political movements or religious sects, or even sports fans. It is possible for an individual to possess multiple, nested identities and thereby to belong to numerous in-groups, the identity of which might be asserted at different times, for different reasons.

The formation of collective identities can have significant impacts. One of these is 'in-group identification,' a psychological process that occurs when an individual incorporates the traits of an in-group into their own concept of the self (Tropp & Wright 2001). This process is not binary or exclusive, meaning that an individual can identify with multiple in-groups simultaneously (Raffield et al. 2016). While an

individual living in Late Iron Age Scandinavia, for example, might have identified primarily with their kin group (the basic social unit of Scandinavian society), they might have also aligned with their local village or community, a political power figure, a warrior or mercantile group, or perhaps with a wider regional identity. Importantly, these identities do not simply represent passive reflections of the self. Rather, they can be 'activated' at specific times through elements such as dress, language or dialect, or the use of group-specific material culture such as pottery or jewellery (Price & Raffield forthcoming). In a recent article (Raffield et al. 2016), my colleagues and I explored how in-group identification influenced the formation and operation of Viking Age warbands. We found that warrior groups could employ a number of strategies that facilitated this process, thereby increasing commitment among members. These included the use of group-specific symbols and dress styles, initiation rites, and the cultivation of pro-group mentalities that distinguished individual warbands from others. Can similar evidence for the creation and expression of distinctive in-group identities be found elsewhere?

Material expressions of insular identity and autonomy

As noted at the beginning of this paper, the old adage that islands function as 'laboratories' for the study of cultural change has long-been questioned and deconstructed by scholars. Yet, given that island communities live in a setting that is clearly defined in geographical terms, it is not unreasonable to assume that, in at least some cases, merely inhabiting such an environment might sow the seeds of collective identification. As Schofield & George (1997) have pointed out, it is surely no coincidence that many islands *do* support communities that are somehow distinct from others around them. As such, the study of in-group identities may be particularly informative when examining processes of social and cultural development in insular contexts. If we turn to the Viking Age Baltic, then there is some good evidence for the creation of both idiosyncratic and hybrid material identities on several islands. The emergence of the picture stone tradition on Gotland, as well as the islanders' continued use of runic inscriptions on grave slabs moving into the medieval period, for example, may represent two such expressions of collective identification. There is also good evidence

Fig. 1. An animal-head brooch from Dalhem, Gotland (SHM 1089) and a box brooch from Tingstäde, Gotland (SHM5575). Photo: Gabriel Hildebrand, Swedish History Museum.

for the creation of localised material identities that were expressed through distinctive forms of jewellery, including the so-called box- and animal-head brooches that have been found on the island and in burials elsewhere (Gustafsson 2013) (Fig. 1). The development of this distinctive jewellery and the messages that it conveyed, however, can only be fully-realised when Gotland is placed within its wider context (see Gustafsson in this volume). Gotland has been argued to have featured dozens of active harbour sites, and the immense quantities of Viking Age silver found concealed on the island indicate that communities had access to extensive trade networks that extended from Western Europe to the Eurasian Steppe. Analyses of coin hoards from Bornholm suggest a similar level of connectivity with the surrounding Baltic region (Ingvardson 2012). As such, we can surmise that while these distinctive forms of jewellery were conceived within a context of intensive cultural interaction, this was done with the express intention of communicating a distinctly Gotlandic identity, both to other islanders and outsiders. This would have not only bound the wearers and those with a knowledge of these objects to a common Gotlandic identity, but it would have also served to distinguish them from others.

The creation of a uniquely Gotlandic form of material culture reflects the fundamental nature of in-groups that is, they exist in opposition to out-groups – people that do not share the same identifying traits as

the in-group. We know from the medieval *Gutalagen* law-code that while the Gotlanders occasionally paid tribute to the Svear kings, the island remained politically independent from the mainland well into the Middle Ages. Was a desire for autonomy reflected in and reinforced through the creation of distinctive regional dress styles? If so, then there may be other evidence for in-group identities on the island. In this, a recent study of 60 burials from Ridanäs by Peschel et al. (2017) may be of interest. Isotopic analysis suggested that only 8 of the 60 individuals were non-locals, meaning that they did not originate from Ridanäs and Gotland. While it is important to recognise that this is only a single study, the results contrast with another recent isotopic study of 42 individuals from the cemeteries at Birka, the results of which suggested that nearly half of the individuals tested were of non-local origin (Price et al. 2018). Given the extensive evidence for trading and communication with off-island groups, do these results imply that non-locals did not habitually settle on Gotland? Is it also possible that Gotland's trading networks were mainly operated by the islanders themselves, with minimal input from non-islanders (Peschel et al. 2017)? At present it is far too early to say, but it is clear that while Gotland was deeply interconnected with both mainland communities and those living further afield, this should not lead us to presume that the inhabitants did not desire autonomy. The creation of independent, insular material identities represented just one way in which the island's inhabitants negotiated their social, political, and economic relationships with off-island societies.

It is important to acknowledge that Gotland was not alone in asserting its independence from mainland communities. A desire to maintain political autonomy can also be seen on Bornholm, which according to the 9th-century merchant Wulfstan of Hedeby not only possessed its own kings but may have functioned as an active pirate base for much of the Viking Age (Price & Raffield forthcoming; for Wulfstan's description see Hedenstierna-Jonson, this volume). Despite coming under the nominal authority of the Danish kings in the late 9th century, analysis of hoards found on the island imply loose economic ties with the Danish kingdom well into the 11th century, thereby suggesting an active local resistance to outside authority (see Lihammer 2007; Ingvardson 2014).

Discussion and final remarks

In this short paper I have attempted to articulate some thoughts concerning the study of psychological processes as they manifested in the distant past. Drawing on previous studies of group formation and collective identification, I have suggested that the consideration of in-group and out-group identities could provide a theoretical framework that contributes to our understanding of how various socio-political and cultural mechanisms underpinned the creation of material culture in insular contexts. There is of course much more to say on this topic. For example, while I have primarily focused on the ways in which island communities express their identities through the creation of insular material styles, it is also important to acknowledge and consider the reasons underpinning the *absence* of non-local materials in specific contexts. On Gotland the prevalence of distinctly Gotlandic-style dress accessories in the burial record, which were even present in a few of the 'non-local' graves at Ridanäs, implies that some visitors resided on the island long enough to have assimilated local customs and dress-styles. While this may be taken to indicate that these individuals were considered by the local community as being 'Gotlandic' themselves, it is striking that we do not find material evidence for the other visitors who must surely have travelled to and died on Gotland during the Viking Age. Were their bodies or belongings returned to their homes by associates, or was the property of non-locals for some reason destroyed or appropriated by local communities? It is impossible to say with any certainty, but the potential absence of this evidence may speak just as profoundly to the identity of the Gotlandic population as does their own distinctive material culture.

It is also worth emphasising that the interpretation of messages conveyed by material culture could be just as subjective in the past as they are today. In a discussion of Gotlandic box brooches, Susanne Thedéen (2012) has argued that the small number of these objects that have been found in off-island contexts (often in major nodal marketplaces such as Birka or Hedeby, which can be considered as cultural 'melting pots') were worn in combination with distinctive dress accessories from other regions to convey a creolised identity. The wearing of box-brooches, either as part of a traditional Gotlandic dress assemblage or one that was more hybridised, could therefore have acted as a signifier of both

insular and pluralistic identities. In this, it is clear that past populations were acutely aware of the influence that material culture played in the creation and signalling of in-group membership.

Finally, it is important to recognise that while the creation of group-specific material identities would have increased the potential for cooperation and cohesion among communities, this also potentially presented island populations with various challenges. As part of future studies, for example, it would be interesting to consider whether material culture was used to signal membership of the more complex, intra-island identities that must have manifested locally on the islands and archipelagoes of the Baltic Sea. If this material can be located, then it is important to consider how the emergence of these identities might speak to political and social stability among island communities during the Viking Age. The harmonious nesting of collective identities is far from given, and negotiating and managing numerous and sometimes conflicting identities would have been an important aspect of daily life. Cooperation and consensus must be nurtured, and any sense of belonging that was naturally afforded by living in an insular environment could have been easily upset by an individual's affiliation with members of their more immediate kinship and social networks, especially during times of hightened tension between local communities and political factions. Modern-day examples of the enmity and animosity that can emerge among insular communities in such circumstances abound; indeed, we need look no further than Britain's troubled and and divisive exit from the European Union (Hobolt 2016). Negotiating and mitigating the impacts of collective identification and action were likely as much of a problem for communities living in the past as they are for us today.

References

Baldacchino, G. 2003. Studying islands: on whose terms? Some epistemological and methodological challenges to the pursuit of island studies. *Island Studies Journal* 3 (1), pp. 37–56.

Boomert, A. & Bright, A. J. 2001. Island archaeology: in search of a new horizon. *Island Studies Journal* 2 (1), pp. 3–26.

Creese, J. L. 2016. Emotion work and the archaeology of consensus: the Northern Iroquoian case. *World Archaeology* 48 (1), pp. 14–34.

Díaz-Andreu, M., Lucy, S., Babić, S. & Edwards, D. N. (eds). 2005. *The Archaeology of Identity: Approaches to Gender, Age, Status, Ethnicity and Religion*. London & New York: Routledge.

Evans, J. D. 1973. Islands as laboratories for the study of culture process. In: *The Explanation of Culture Change: Models in Prehistory,* C. Renfrew (ed). London: Duckworth, pp. 517–20.

Fowler, C. 2016. Relational personhood revisited. *Cambridge Archaeological Journal* 26 (3), pp. 397–412.

Franklin, M. & Fesler, G. (eds.) 1999. *Historical Archaeology, Identity Formation and the Interpretation of Ethnicity*. Richmond, VA: The Colonial Williamsburg Foundation.

Garcia, T. & De Monte, S. 2012. Group formation and the evolution of sociality. *Evolution* 67 (1), pp. 131–41.

Gil-White, F. J. 2001. Are ethnic groups biological "species" to the human brain? Essentialism in our cognition of some social categories. *Current Anthropology* 42 (4), pp. 515–54.

Gounder, F. (ed.) 2015. *Narrative and Identity Construction in the Pacific Islands*. Amsterdam: John Benjamins.

Gustafsson, NB. 2013. *Casting Identities in Central Seclusion. Aspects of Non-Ferrous Metalworking and Society on Gotland in the Early Medieval Period*. Stockholm: Stockholm University.

Hobolt, S. B. 2016. The Brexit vote: a divided nation, a divided continent. *Journal of European Public Policy* 23 (9), pp. 1259–77.

Hudson, M. J. 2012. Austronesian and Jōmon identities in the Neolthic of the Ryukyu Islands. *Documenta Praehistorica* 39, pp. 257–62.

Ingvardson, G. 2012. Nørremølle – the largest Viking Age silver hoard of Bornholm (Denmark). *Journal of Archaeological Numismatics* 2, pp. 281–346.

Ingvardson, Gitte T. 2014. Trade and power – Bornholm in the late Viking Age. In: *Northern Worlds – Landscapes, Interactions and Dynamics. Research at the National Museum of Denmark*, H.C. Gulløv (ed). Copenhagen: The National Museum of Denmark, pp. 325–337.

Insoll, T. (ed.) 2007. *The Archaeology of Identities: A Reader*. London & New York: Routledge.

Javarone, M. A. & Marinazzo, D. 2017. Evolutionary dynamics of group formation. *PLoS ONE* 12 (11), e0187960. https://doi.org/10.1371/journal.-pone.0187960.

Jones, S. 1997. *The Archaeology of Ethnicity: Constructing Identities in the Past and Present*. London & New York: Routledge.

Jong, J., Whitehouse, H., Kavanagh, C. & Lane, J. 2015. Shared negative experiences lead to identity fusion via personal reflection. *PLoS ONE* 10 (12), e0145611. https://doi.org/10.1371/journal.pone.0145611.

Korostelina, K. 2007. *Social Identity and Conflict: Structures, Dynamics, and Implications*. New York: Palgrave Macmillan.

Lihammer, A. 2007. *Bortom riksbildningen: Människor, landskap och makt i sydöstra Skandinavien*. Lund: Lund University.

Peschel, E. M., Carlsson, D., Bethard, J., Beaudry, M. C. 2017. Who resided in Ridanäs?: A study of mobility on a Viking Age trading port in Gotland, Sweden. *Journal of Archaeological Science: Reports* 13 (2017), pp. 175–84.

Price, N. & Raffield, B. Forthcoming. *The Vikings*. Unpublished manuscript in preparation.

Price, T. D., Arcini, C., Gustin, I., Drenzel, L. & Kalmring, S. 2018. Isotopes and human burials at Viking Age Birka and the Mälaren region, east central Sweden. *Journal of Anthropological Archaeology* 49, pp. 19–38.

Raffield, B., Greenlow, C., Price, N. & Collard, M. 2016. Ingroup identification, identity fusion, and the formation of Viking warbands. *World Archaeology* 48 (1), pp. 35–50.

Raffield, B., Price, N. & Collard, M. 2017. Polygyny, concubinage and the social life of women in Viking-Age Scandinavia. *Viking and Medieval Scandinavia* 13, pp. 165–209.

Robb, J. 2001. Island identities: ritual, travel and the creation of difference in Neolithic Malta. *European Journal of Archaeology* 4 (2), pp. 175–202.

Schofield, J. & George, J. J. 1997. Why study islands? In: *Island Studies: Fifty Years of the Lundy Field Group,* R. A. Irving,, A. J. Schofield & C. J. Webster (eds). Bideford: The Lundy Field Society, pp. 5–13.

Spriggs, M. 2008. Are islands islands? Some thoughts on the history of chalk and cheese. In: *Islands of Inquiry: Colonisation, Seafaring and the Archaeology of Maritime Landscapes,* G. Clark, F. Leach, & S. O'Connor (eds.). Canberra: ANU ePress, pp. 211–226.

Tajfel, H. 1981. *Human Groups and Social Categories: Studies in Social Psychology*. Cambridge: Cambridge University Press.

Tajfel, H., Billig, M. G., Bundy, R. P. & Flament, C. 1971. Social categorization and intergroup behaviour. *European Journal of Social Psychology* 1 (2), pp. 149–78.

Thedéen, S. 2012. Box brooches beyond the border. Female Viking Age identities of intersectionality. In: *To Tender Gender: The Pasts and Futures of Gender Research in Archaeology*, I.-M. Back Danielsson & S. Thedéen. (eds). Stockholm: Stockholm University, pp. 61–81.

Tomasello, M. 2014. The ultra-social animal. *European Journal of Social Psychology* 44, pp. 187–94.

Tropp, L. R. And Wright, S. C. 2001. Ingroup identification as the inclusion of ingroup in the self. *Personality and Psychology Bulletin* 27, pp. 585–600.

Turner, J. C. 1985. Social categorization and the self-concept: a social cognitive theory of group behavior. In: *Advances in Group Processes: Theory and Research*, E. J. Lawler (ed.). Greenwich, CT: JAI, pp. 77–122.

Wallin, P. & Martinsson-Wallin, H. 2016. Collective spaces and material expressions: ritual practice and island identities in Neolithic Gotland. In: *Decoding Neolithic Atlantic and Mediterranean Island Ritual*, G. Nash & A. Townsend. (eds). Oxford: Oxbow Books, pp. 1–16.

Whitehouse, H. 1996. Emotion, metaphor and memory in Melanesian initiation cults. *The Journal of the Royal Anthropological Institute* 2 (4), pp. 703–15.

Whitehouse, H. & Lanman, J. A. 2014. The ties that bind us: ritual, fusion, and identification. *Current Anthropology* 55 (6), pp. 674–695.

LUDVIG PAPMEHL-DUFAY

There's something about islands: similarities and differences between Öland and Gotland in the Migration period

Introduction

In this brief note, I will discuss some archaeological aspects connecting and separating the islands of Öland and Gotland with a focus on the mid Iron Age in Scandinavia, the late Roman Iron Age and the Migration period (c. 200–550 AD). The point of departure will be the Iron Age heritage on the island of Öland, especially the ringfort

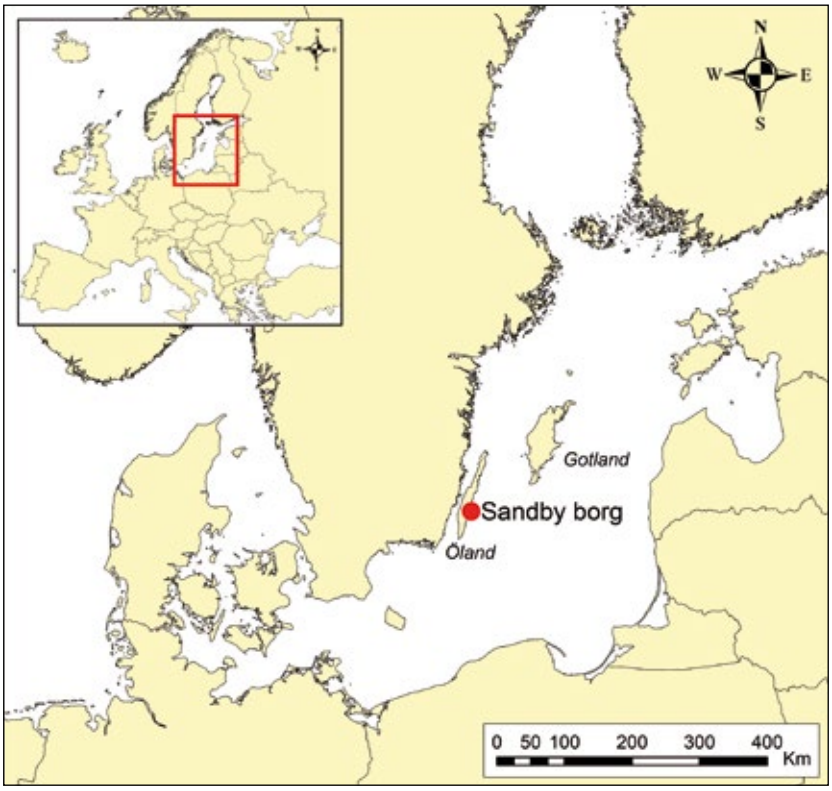


Fig. 1. Map with Öland and the location of Sandby borg marked out.
Map: Laila Kitzler Åhfeldt, Swedish National Heritage Board.

Sandby borg where excavations have been conducted for the last couple of years. But first, some thoughts on islands in general and the large ones in the Baltic Sea in particular.

Today, islands far off the coast tend to be regarded as synonymous with isolation. Gotland, situated roughly 85 kilometres from the Swedish mainland right in the middle of the Baltic, is a good example of this. Accessible only by boat or by aeroplane, getting there requires both some time and effort. Once there, visitors are struck by the feeling of otherness and uniqueness expressed not least in the overwhelming sense of an immediately present past. The island of Öland, even though not very remote and actually clearly visible from the mainland (the distance is only 3,5 kilometres at the narrowest part of the Kalmar straight), shares some of this sense of "otherness" and is likewise extremely rich in terms of archaeological remains. The slogan for the island as a tourist destination is actually "Fundamentally different" (Sw. "I grunden annorlunda"). For much of the 20th century, the island was regarded as being pretty isolated. This changed radically with the opening in 1972 of the Öland bridge connecting Färjestaden on Öland with Kalmar on the mainland. Still today, the bridge plays a vital role for the wealth and health of the island and its inhabitants, with many commuters (including myself) passing it every day.

If we just hang on to the bridge for a moment (sorry…), one thing is especially relevant to bear in mind. The peripheral character of islands, normative in the way we view our surroundings today, is in fact totally dependent on the way we travel and especially the massive domination since the mid 20th century of using vehicles for transport. If road travel represents the default mode of transportation, then the abundance and quality of these routeways becomes an important factor in labelling a certain location as central, peripheral, or even remote. If we are to extend our interpretation back into the past, however, then it is clear that this perspective is often totally irrelevant. Basically, for the whole of Scandinavian (pre)history, from early Mesolithic hunter-gatherers through to the early 20th century, travelling was best conducted by boat. As such, the definition of what constituted "near" and "far away" was totally different geographically. Islands were natural stops along any route, and judging from the archaeological evidence, the large islands in the Baltic were all central in long-distance travel in the

region at least from the Neolithic onwards. This may seem a straightforward and uncomplicated statement, but it has important implications for how we understand the uniqueness and rich prehistory of the large islands in the Baltic today.

In archaeology, islands have been distinguished and interpreted in different ways through time. In the 1970s, islands were deterministically regarded as potential laboratories for the study of culture process and change, an idea in which the geographic isolation and natural boundaries of islands were supposed to work in much the same way as the Galapagos did for Darwin (Evans 1973; see also Raffield this volume). A general understanding was that most island societies, like any island population, display certain cultural features that in one way or another separate them from mainland societies (Evans 1973, 1977). In this way, each island society will develop its own history which, though linked to neighbouring areas, in principle always in some respects will be distinctively different. In more recent studies, less emphasis has been placed on the natural deterministic aspects and instead on the role of islands as cultural melting pots (e.g. Patton 1996; Broodbank 2000).

This "island perspective" offers a view where the uniqueness and "otherness" of island societies are acknowledged, however the explanations I argue are not to be sought in isolation and lack of contacts with neighbouring areas, but quite the contrary. Islands, especially the large ones in the Baltic, were communicative nodes where people and traditions converged, and as such they often facilitated the development of strong local identities that adopted specific traits from a range of foreign influences around the Baltic area.

The islands of Öland and Gotland both fit well into this view of the large islands as cultural nodes in the Baltic. They have many things in common, but also distinct traits separating them. Both consist of limestone bedrock, Öland of Ordovician origin and Gotland of Silurian. Both are extremely rich in terms of archaeological remains, but the period of their "golden ages" vary. Öland is famous for its wealth of Roman and Migration period gold, while Gotland is renowned for its unsurpassed Viking Age silver hoards (still not exactly lacking Roman and Migration period gold…). Both have a large number of prehistoric fortifications, but their character again differs.

One thing uniting the Iron Age landscape of both islands is the tradition of building three-aisled longhouses with walls made of stone (e.g. Stenberger 1933, 1955a, 1955b). This is a trait separating the islands from the Swedish mainland, where domestic stone architecture is absent up to the early middle ages (e.g. Göthberg 2000). On both Öland and Gotland, however, stone-built houses seem to have been the norm and common practice from around 200 AD and up to c. 600 AD (Cassel 1998; Fallgren 2006). From the available evidence, the tradition seems to arise and disappear on both islands more or less simultaneously, which to my knowledge is a peculiarity that has yet to be explained scientifically. On Öland, building traditions prior to the stone-built houses are virtually unknown (Fallgren 2006). An interesting note is that similar houses from the same period also occur abundantly in a limited part of SW Norway, in Rogaland and Vest-Agder (Stenberger 1933:164ff; Fallgren 2006:25). I will not explore the origins and possible connections of these architectural traditions more deeply here, but it is worth noting that, in cultural-historical terms, the stone-house tradition on Öland and Gotland remains a bit of a mystery.

In contrast to this, the Iron Age fortresses, which are to some extent contemporaneous with the tradition of stone-built houses, differs between Öland and Gotland. The characteristic Öland ringforts, with their massive ring-walls surrounding totally settled areas with dozens or even up to c. 100 stone-built house structures, lacks parallels in the extremely rich fort material on Gotland. Here, some 70 prehistoric forts cover a wide range of different forms and shapes and they also cover a wide time frame (Berggren & Engström 1985; Cassel 1998; Arnberg 2007). Of the 15 ringforts securely documented by archaeologists on Öland, at least 12 were constructed in the 4th or 5th century AD, and of these at least 10 contain stone-built houses (Wegraeus 1976; Fallgren 2008). Several of the ringforts, furthermore, seem to share a common layout, and in the case of Eketorp II and Sandby borg, the fortresses even feature the exact same number of houses (e.g. Victor 2015). Given the scale of the constructions, which in the cases of Sandby borg and Eketorp II feature drystone walls 4 metres thick and possibly up to 5 or 6 metres tall, in addition to enclosing an area with 53 stone-built houses, the thought of normative building principles and a standard layout is quite mind-blowing. What social, cultural and organisational

Fig. 2. Aerial photo of Sandbyborg. Photo: Sebastian Jakobsson.
After Papmehl-Dufay & Söderström 2017.

circumstances underlie the fact that all these forts were built on Öland in just a couple of generations? On Gotland, and in fact anywhere in Scandinavia, this ringfort type seems to be lacking altogether (cf. Skarin-Frykman 1967; Nylén et al. 2005). Although Öland is indeed flat, the difference cannot be attributed to geological or topographical conditions alone, as suggested for example by Wegraeus (1976). Instead, the Öland ringforts should be regarded as representing a distinct and homogenous tradition that was never embraced on Gotland. Given the apparent common tradition in the building of domestic houses during this period, how come the fortifications differ so clearly?

Another difference between Öland and Gotland in this period can be seen in the import of Roman gold coins. On Öland, some 365 solidi struck mainly in the period c. 400 AD to 480 AD, have been found (Fischer 2017). Very few coins have younger dates. The narrow date of the coins and the sudden end of the gold import have been suggested to represent one or several catastrophic events in c. 476/477 AD (Stenberger 1933; Fagerlie 1967). The possibility that such a catastrophic event took place has been extensively discussed (cf. Näsman 1978), not least since numerous settlements seem to have been abandoned at around this time (Stenberger 1933; see however Edgren 1986). Quite notably, all the large solidus hoards on the island have tpq-dates at around this

time (Herschend 1980). On Gotland on the other hand, the influx of solidi is modest prior to c. 480. The main period of gold import here is instead from c. 490–550 AD (Fagerlie 1967; Klang 2013). Here, the abandonment of settlements and the sudden halt of gold imports have been suggested to correspond to dramatic climatic events (Gräslund & Price 2012). Clearly, the means of gold acquisition differed between the two islands, which in turn indicates differences in their access to and use of long–distance networks. Also, the hypothesis of violent conflict ending the gold import to Öland suggests that the islands may have had different, perhaps competing, military alliances and loyalties.

In recent years, the notion of violent conflict in the late 5th century on Öland has once again been brought to the fore. At the ringfort of Sandby borg, excavations since 2011 have revealed evidence of a massacre in which possibly hundreds of people were killed and their bodies left at the site (Alfsdotter et al. 2018). The exact date of this violent event is not known, but elaborate jewellery deposits supposedly connected to the event together with the extensive artefact assemblage from the excavations suggest that the ringfort was put out of use at the end of the 5th century, c. 500 AD at the latest (Victor 2015; Alfsdotter et al. 2018). Radiocarbon dates will shed more light on this issue shortly. If this date is correct, a tentative connection could be made between the massacre at Sandby borg and the largest solidus hoard on the island – that at Åby, some c. 5 kilometres to the north of the ringfort, which has a tpq date of 477 AD (Fagerlie 1967). No excavations have been carried out at the Åby site, but that the hoard represents a major Iron Age farm is not a far-fetched guess. Furthermore, such a farm would most probably have been involved in the construction and use of Sandby borg. If so, then a possible reason for the hoard never being recovered could be that its owner met his or her fate at Sandby borg. Hence, the hypothetical violent catastrophe suggested by earlier scholars to be responsible for the widespread hoarding of gold (or rather, the widespread lack of retrieval of hoards) in the late 5th century (cf. Stenberger 1933; Fagerlie 1967) might be reflected in the massacre at Sandby borg. If this theme is explored a bit further, another question arises: is the massacre at Sandby borg to be seen as an isolated event, or does it represent a large-scale attack on the island in which the ringfort was but one of many establishments affected? Mårten Stenberger noted that almost all excavated houses dating from this period across the island were not only

abruptly abandoned in c. 500 AD, but they also seem to have been burnt down (Stenberger 1933). While later researchers have questioned the evidence for fire at the sites excavated by Stenberger (Edgren 1986), more recent excavations have in fact yielded evidence of the burning down of houses on the island in this particular period (Papmehl-Dufay in prep.). It is worth noting the occurrence of human skeletal remains at Eketorp in relation to this (Ulf Näsman, personal communication). The finds are not properly published and the number of individuals is presently not known to me. At the time of excavations, the finds of human remains apparently never caught much attention, but in the light of the findings at Sandby borg the presence of unburied human remains at Eketorp becomes highly interesting. Further research will hopefully bring more light to this.

In conclusion, the issue of conflict and violence in the late 5th century on Öland, and the way it may have affected or perhaps involved neighbouring areas (such as Gotland), is an interesting area of future research. The common building traditions do suggest cultural connections at least during the period of the Roman Iron Age, however the differences in fortresses and gold imports a couple of centuries later show divergent cultural paths. The catastrophe that seems to have affected Öland in the late 5th century is also of significant interest. Was this a matter for Öland alone, or did it affect Gotland as well? Is it even possible that the tentative attack(s) was perpetrated by the Gotlanders themselves?

References

Alfsdotter, C., Papmehl-Dufay, L. & Victor, H. 2018. A moment frozen in time: evidence of a late 5th century massacre at Sandby borg. *Antiquity* 92(362), pp.421–436.

Arnberg, A. 2007. *Där människor, handling och tid möts: En studie av det förromerska landskapet på Gotland.* Stockholm Studies in Archaeology 42. Stockholm: Stockholm University.

Berggren, E. & Engström, J. 1985. Gotlands fornborgar efter äldre territoriell indelning. *Tor* XX, pp. 217–227.

Broodbank, C. 2000. *An Island Archaeology of the Early Cyclades.* Cambridge: Cambridge University Press.

Cassel, K. 1998. *Från grav till gård. Romersk järnålder på Gotland.* Stockholm Studies in Archaeology 16. Stockholm: Stockholm University.

Edgren, B. 1986. Den öländska kämpagravsbygdens ödeläggelse. *Tor* 19, pp. 91–130.

Evans, J. D. 1973. Islands as laboratories for the study of culture process. In: *The explanation of culture change. Models in prehistory*, C. Renfrew (ed.). Pittsburgh: Duckworth, pp. 517–520.

Evans, J. D. 1977. Island archaeology in the Mediterranean: problems and opportunities. *World Archaeology* (9) 1, pp. 12–26

Fagerlie, J. M. 1967. *Late Roman and Byzantine solidi found in Sweden and Denmark*. Numismatic notes and monographs 157. New York: American Numismatic Society.

Fallgren, J.-H. 2006. *Kontinuitet och förändring. Bebyggelse och samhälle på Öland 200–1300 e.Kr.* Aun 35. Uppsala: Uppsala universitet.

Fallgren, J.–H. 2008. Fornborgar, bebyggelse och odlingslandskap. In: Tegnér, G. (eds.) *Gråborg på Öland. Om en borg, ett kapell och en by.* Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, pp. 119–136.

Fischer, S. 2017. The material culture of 5th century returning veterans. In: *The Sösdala horsemen, and the equestrian elite of fifth century Europe*, C. Fabech & U. Näsman (eds.). Jutland Archaeological Publications 99. Aarhus: Jutland Archaeological Society, pp. 313–327.

Gräslund, B. & Price, N. 2012. Twilight of the gods? The "dust veil event" of AD 536 in critical perspective. *Antiquity* 86 (332), pp. 428–443.

Göthberg, H. 2000. *Bebyggelse i förändring: Uppland från slutet av yngre bronsålder till tidig medeltid.* OPIA 25. Uppsala: Uppsala universitet.

Herschend, F. 1980. *Myntat och omyntat guld: två studier i öländska guldfynd*. Uppsala: Uppsala universitet.

Klang, A. 2013. Guldfynd på Gotland. En jämförande studie av guldfynden från folkvandringstiden. Unpublished student essay in Archaeology. Stockholm: Stockholms universitet.

Nylén, E., Lund Hansen, U. & Manneke, P. 2005. *The Havor hoard: the gold, the bronzes, the fort*. Antikvariska serien 46. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien.

Näsman, U. 1978. Öland, Eketorp, and the transition between Montelii periods VI and VII. *Tor* XVII, pp. 335–361.

Papmehl-Dufay, L. in prep. Gårdarna runtomkring. Seminarieundersökning i september 2015 av husgrunden RAÄ 37:1, Sandby sn, Öland. Rapport från arkeologisk undersökning. Kalmar: Linnéuniversitetet.

Papmehl-Dufay, L. & Söderström, U. 2017. Creating Ambassadors Through Digital Media: reflections from the Sandby borg project. *Internet Archaeology* 46.

Patton, M. 1996. *Islands in time. Island sociogeography and Mediterranean prehistory.* London/New York: Routledge.

Skarin-Frykman, B. 1967. Eketorps borg. A study of the origin of some Öland forts. *Tor* 1965/1966, pp. 198–229.

Stenberger, M. 1933. Öland under äldre järnåldern. En bebyggelsehistorisk undersökning. Stockholm: Kungliga Vitterhets Historie och Antikvitets Akademien.

Stenberger, M. 1955a. *Vallhagar. A migration period settlement on Gotland, Sweden.* P1. Köpenhamn: Ejnar Munksgaards Forlag.

Stenberger, M. 1955b. *Vallhagar. A migration period settlement on Gotland, Sweden*. P2. Köpenhamn: Ejnar Munksgaards Forlag.

Victor, H. 2015. Sandby borg – ett fruset ögonblick under folkvandringstid. In: *Grävda minnen. Från Skedemosse till Sandby borg*, K.-H. Arnell & L. Papmehl-Dufay (eds.). Kalmar: Kalmar läns museum, pp. 97–115.

Wegraeus, E. 1967. The Öland ring-forts. A literary study. In: *Eketorp. Fortification and settlement on* Öland*/Sweden. The monument*, K. Borg, U. Näsman & E. Wegraeus, E. (eds.). Stockholm: Royal Academy of Letters History and Antiquities, pp 33–44.

CHRISTOPH KILGER

Long distance trade, runes and silver: a Gotlandic perspective

Introduction

The importance of trade on Gotland is shown in the encyclopedia *De proprietatibus rerum*, written by the Franciscan friar Bartolomaeus Anglicus in the middle of the 13th century. In his chapter on geography, Anglicus describes the various characteristics of several regions and places, which would have been common knowledge to a medieval scholar at his time. Gotland is not only referred to as the home of the ancient Gothic tribes, but also as a fertile island with access to pasture, fish and many kinds of merchandise. Goods like furs, combs and other resources were being brought to the island by ship (Widmaier & Diekman 2016). Anglicus' entry is an interesting source because it provides a detailed and contemporary account of an island society dedicated to trade and commerce.

Trade and exchange relations with the outer world were also crucial for Gotlandic society during earlier periods. Visible and tangible testimonies to the global connections of the islanders can be found in Gotland's Viking Age silver hoards. More than 750 hoards, containing some 179,900 silver coins, have been found on the island. No other region of the Viking world has yielded so many coin- and silver-finds from the period. The numismatic record shows that the island's community obtained silver coins from different parts of the known world. We know today that the hoarding record stretches continuously throughout the Viking Age, from c. 800 through to 1150, a period of some 350 years (Jonsson 2017). The numismatic components not only provide information on the geography and directions of the Gotlanders' long distance contacts during this period, but the presence of the hoards themselves conveys a sense of continuity in these engagements.

Several topics and questions have been suggested by the organisers of this workshop to approach the social development of island societies in the Baltic Sea. Were places like Gotland insular backwaters, or were

they driving important processes of social and economic development? In what ways were islands nodes of communication and interaction? How can we approach innovation and preservation of knowledge, technology through the study of material sources? In this paper, I am going to address these questions in the context of the Viking expansion and interaction which is an overarching theme in this book.

Some highly inspiring talks presented by my colleagues at the workshop have addressed how the discussion of runes can provide opportunities to approach the mentalities and different identities of island societies. As argued by Laila Kitzler Åhfeldt in this volume a contextual approach towards runes is key to understanding their social significance, the circumstances in which they were used, and by whom. Magnus Källström talked about runic writing systems and the relationship between runic scripture and literacy. My own field of expertise is the use of silver, coinage, and the development of trade and exchange during the Viking and Middle Ages. One basic feature of the Viking world is the development of long-distance trading networks and commodity exchange. In the following I will argue that Viking trading networks were intellectually stimulating environments pooling together knowledge and ideas from different places. Through the application of a network perspective, I will also claim that runes and silver had many things in common. Some of the following observations, which are based on the runological and numismatic evidence, might provide new insights into the complexity of Gotland's social organisation as a seafaring nation, in addition to clues attesting to the endurance of its networks.

Runestones and travellers

Runic inscriptions represent an important source of information on aspects of Gotland's long distance trading networks. Some runestones, such as the famous Pilgårds stone from north-eastern Gotland, provide direct evidence for the people who were participating in these expeditions (Fig. 1). The original location of the runestone is not known, but it was probably situated not far from a Viking Age harbour in Boge bay. Pilgårds is dated to the 9th or 10th century (Källström 2012). The inscription mentions an unsuccessful expedition into the interior of Russia, which tragically ended near the rapids of Aifur on the Dnepr River. The inscription says:

> Brightly painted, this stone was raised by Hegbjarn and his brothers Rodvisl, Austain and Emund. They have raised stones in memory of Ravn south of Rufstain. They penetrated far into the Aifur. Vivil was in command (Westholm 2009:128)

Beside the Pilgårds stone there is another traveller's stone from the church of Sjonhem, which is situated in the middle of the island. The Sjonhem runestone, which is dated to the late Viking Age, also mentions the name of several people who were engaged in long distance journeys. Even this journey hade a fatal outcome:

Fig. 1. The Pilgårds stone (Gotland Museum, Id GFFS005O820_1).
Photo: Raymond Hejdström, © Gotland Museum.

> Rodvisl and Rodälv had these stones raised in memory of their three sons. This stone is in memory of Rodfos. He was betrayed by the Wallachians on an outward journey. God help Rodfos' soul. May God betray those who betrayed him (Westholm 2009:128).

In both instances, the stones commemorate the fate of brothers or sons who died on their travels abroad. On the Pilgårds stone six male persons of the expedition are mentioned, out of which four were addressed as brothers. The authors of the Sjonhem monument are parents who lament the death of their three sons. As contemporary sources the runestones allow us to get glimpses of the organisation of long-distance enterprises. As argued by Raffield in this volume, one feature of island societies is the formation of collective identities through in-group identification and its maintenance through intra-group interaction (see also Raffield et al. 2015). Considering this perspective, the brothers mentioned on the Pilgårds stone might not necessarily be relatives in a biological sense, but they might have rather considered themselves as brothers, companions, or fellows engaging in common enterprises abroad. Maybe these fellowships were the basic elements of the networks operating from Gotland, recruiting male members of big families originating from different farms on the island (Kilger in print).

Runic script and networks

Another interesting source which provides clues into the organisational aspects of trade are the runic inscriptions themselves. The evidence is based on conventions of writing runic letters, which might be termed as different orthographic traditions or writing systems. In the early 8th century the younger futhark system emerged in Scandinavia, however it is not known where it was originally designed or by whom (Källström 2014:108). Right from the beginning two variants emerged within this later system, each of which shows a distinct regional distribution pattern. The so-called long-branch runes are mainly found in Denmark, whereas the short-twig runes have their main distribution in Sweden and Norway. The town of Birka for example, is a prominent find spot for small objects with short-twig runes (Källström 2014:109-112).

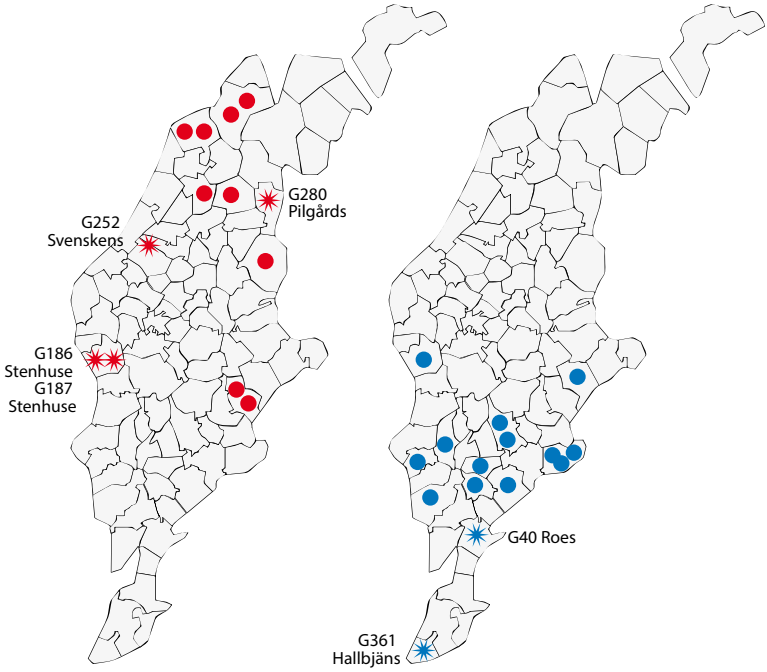


Fig. 2. Distribution pattern of picture stones with short-twig runes (red) and long-branch runes (blue). After Källström 2012:121.

Interestingly, both writing systems are present on Gotland. Many of them are found on picture stones, but also on runic monuments which lack the typical figural elements of the picture stones. Most of these date from the late Viking Age and bear a resemblance to rune stones from Uppland (Källström 2012:120). Some extraordinary inscriptions such as the Pilgårds stone are only epigraphic, which means they have no ornamentation at all. Picture stones have been found over the whole island but the ones with short-twig runes have a pronounced northern distribution, whereas the ones with long-branch runes are found on picture stones and later runic monuments on southern Gotland (Fig. 2). On Gotland, all inscriptions using the short-twig rune system should be dated before 1000, whereas most of the inscriptions with long-branch runes probably belong to the 11th century (Källström 2012:121-

2). There are, however, exceptions to this chronological pattern. Two inscriptions with long-branch runes are early and dated to the 8th century: one of these is found on an amulet from a female burial in Hallbjäns in Sundre, and the other is a short inscription on a runestone from Grötlingbo Roes (Källström 2012:121). The distinct regional and chronological distribution pattern might also be interesting to discuss in the context of travelling and trading.

From a numismatic perspective, the period when short-twig runic inscriptions were used on Gotland corresponds roughly with the period of the eastern imports of silver from the Islamic world, which started in the early 9th century and lasted into the mid-10th century (Adamczyk 2014; Kilger 2008). At the end of the 10th century the silver flows changed direction, and coins from Western Europe were entering Gotland. As mentioned earlier, the long-branch runes are mainly found in Denmark. The shift to the use of long-branch runes on the picture stones and other runic monuments in southern Gotland may relate to this geographical change in trade relations and the establishment of more regular contacts with southern Scandinavia during the Late Viking Age. Western coins such as German Pfennige and English pennies were probably acquired by Gotlandic traders at harbours in the Danish area. One potential destination for Gotlandic traders was the town of Hedeby (Hillberg 2016). The numismatic evidence suggests that travelling continued further west, to the shores of the German empire, to landing places along the coastline in Northern Germany, and to towns in the Rhine estuary (Jonsson 1990; von Heijne 2004:136).

Could the presence of two different writing conventions on Gotland be explained by trade? One probable answer might be that runes and trade, silver and exchange are mutually related. The handling of silver, and the writing and reading of runes, could be characterised as common professional practices performed by a group of specialists. Communities of traders and artisans were not only sustained through social bonds but also through learning and the transfer of knowledge. The earliest inscriptions of the younger futhark have been found in Ribe, which developed as a commercial gateway linking and combining North Sea and Scandinavian exchange systems during the 8th century (Ashby, Coutou & Sindbaek 2015). Urban places like Ribe were vibrant

and dynamic social environments, and they might have provided ideal conditions not only for the transformation of the runic alphabet but also for its use among a community of specialists engaged in long distance trade and handicraft production.

The presence of both runic variants on Gotland may be explained because of the presence of different networks operating from the island. Sharing information and conveying messages over large distances, such as information about conditions on distant destinations or information about deliverances of commodities, would have been essential to the operation of trading networks. Much of the information flow within these networks was certainly transmitted through oral communication, but in some instances runic inscriptions were a logical means of conveying short messages or notes, a mnemonic device for different purposes. For example, owner-labels on small wooden pins with runic inscriptions have been found in the medieval town of Trondheim. Owner-labels, the earliest examples of which are dated to the 11th century, were used to signify ownership to goods (Christophersen 1998:28–34). Several runic inscriptions, most of them short-twig inscriptions, have also been found on a variety of small objects from Birka, indicating the runes were used on a daily basis and on different occasions among the urban population (Källström 2014:111-2). In any case, the appearance of the younger futhark system in early Viking urban environments such as Ribe and Birka may reflect the need for different modes of communication.

However, so far there is little evidence for the use of runes relating to commercial activities on Gotland during the Viking Age. So far, there is evidence of runes on a variety of small objects such as whetstones and brooches. As suggested by Laila Kitzler Åhfeldt in this volume some of the so-called runic whetstones might instead have been used as touchstones for handling and crafting precious metals. If writing runes was much more common in the Viking Age on Gotland this should be more traceable through the archaeological record. Based on the testimony of later sources, we know that people on Gotland in the Middle Ages were probably literate to a lesser or greater extent. According to the Guta Law, which dates from the mid 13th century the Gotlanders used wooden tablets to reckon and prove genealogies. Such tablets were probably common on Gotland but none has survived (Peel

2009:29f, 122). Interestingly the runic inscriptions on small objects from Birka have been carved on bone, antler, metals like silver and copper and whetstones. None were made of wood (Källström 2014:110-111). The absence of inscriptions on wooden objects might have a source critical explanation. The survival of organic materials in the archaeological record, especially in wood, is dependent on ideal preservation conditions. For instance, at Birka wooden objects and constructions have exclusively been recorded in wet and waterlogged contexts.

Finally, we have to bear in mind that hoards with dirhams and western pennies have been found all over the island. There is no direct correlation between hoards from different periods and the skewed distribution of inscriptions with either short-twig or long-branch runes. What the peculiar distribution patterns of the runic writing conventions might show is the dominance of a highly conventional use of runic letters in two different areas on the island. The rather late appearance of the long-branch runes and its marked southern distribution, especially, might indicate that people living on southern Gotland sustained contact and trade relations with the Danish areas.

Knowledge, skills and resources

The success of merchants in long distance engagements depended on their capacity to accumulate and to engage different resources and skills. One such skill was knowledge about weight systems and monetary units of account, the use of which was necessary to determine the value of commodities and silver used in exchange. Viking merchants probably had a profound knowledge of the Islamic mithqal system, which operated on a global scale within and outside the Caliphate (Kilger 2015a). Long distance travel may also have contributed to the development of certain abilities and routines crucial for exploring distant places, such as planning journeys, imagining routes and final destinations, and mapping the known world by different means (Sindbaek 2005). Fundamental in this process is the development of networks across the Viking world, which were operating almost on a global scale.

Network theory has provided new insights into long distant contacts during the Viking Age, and how these were organised and structured at varying geographical and logistical scales (Sindbaek 2007). Many aspects of how these networks operated and why they were so success-

ful remain to be explored. An important question in this context is how Viking towns and trading places interacted within these networks. Early towns such as Birka, Ribe, Åhus, Groß Strömkendorf, Truso, Grobina and Staraja Ladoga discussed elsewhere in this volume were already established in the Baltic Sea zone and adjacent regions during the 8th century. Situated along the coast and rivers, accessed from the sea by ships and crowded with people possessing different skills and ethnic affiliations, these places created arenas for social interaction. A promising field for future research would be to study how new demands and needs in these environments triggered intellectual responses and technical innovations. The development of the younger futhark and the adaption of the sail on seagoing vessels in the 8th century might be seen in this context (see also contributions by Hedenstierna-Jonson and Ljungkvist this volume).

A comparative cultural and social trajectory for the Viking expansion in the Baltic Sea is provided by the establishment of the Greek colonies and the development of trade relations in the Mediterranean Sea during the 8th and 7th centuries BC. The creation of the alphabet out of the Phoenician writing system, for example, might reflect similar social and intellectual processes in trading communities and provide a blueprint for understanding the development of the younger futhark system. The Viking and Greek diasporas had many things in common which might be an interesting field for comparison in future studies. As discussed by Gustafsson in this volume, Gotland society did not establish towns and larger harbors like those seen at Hedeby, Ribe or Birka, which could have acted as hubs for trade, commerce and long-distance engagement. Instead harbors on Gotland operated on a small-scale and were probably seasonal, at least until the 11th century when this pattern changed (as elaborated by Gustafsson, this volume). How Gotlandic trading networks operated in the absence of these trading hubs and urban environments that were so vital for sustaining long distance engagements elsewhere, however, still remains to be explored.

One key for approaching the social organisation of Gotlandic society might be to understand what silver itself meant to the Gotlanders. Who was using silver and how? Who were the pioneers of the evolving silver economy and why did it start? In considering silver from an

economic and a monetary perspective, I would like to argue that silver also was a resource that enabled individuals with different skills in a society to work together and to cooperate. It also enabled the value of completely different objects to be compared and agreed upon, and by means of monetary abstraction to translate quality and quantity into a common scale. In my opinion, Gotlandic society became monetised to a certain extent when silver arrived in larger quantities on the island during the 9th century. As part of this process weighed silver developed into an asset and acquired monetary power. As I have argued elsewhere (Kilger in print), the many hoards on the island might indicate the formalisation of various transactions and contracts between different families. Many hoards, for example, might represent dowries, providing the bride with security when marrying into another family on the island. As "contract-silver", hoards not only balanced the delicate issue of claims to inheritance within and between families, but they also functioned as a means of building up alliances of knowledge between different groups on the island. It probably was silver that nourished the social complexity of Gotlandic society and enabled it to sustain its networks.

Entrepreneurs and professionals

In this final section, I will present some material evidence on the organisation of trade. One way to explore the wide palette of different skills and knowledge within the networks of Gotlandic traders is through the analysis of the silver hoards themselves. In his discussion on the Pilgård stone, its origins and the intellectual environment behind the inscription, Magnus Källström suggests that north-eastern Gotland and especially the area of Bogeviken could have been a center for the use of runic inscriptions during the early Viking period (Källström 2012:127). His suggestion might also be supported through the study of early Viking Age hoards. The area round Bogeviken, especially, is one of the most prolific localities for hoarding on north-eastern Gotland, and was home to the huge hoards discovered on the farm of Spillings – the largest ever discovered on the island (Fig. 3).

The Spillings hoards provide information on the trading environment that once existed in the Bogeviken area (for a presentation of the hoard, its historical and archaeological context, see Pettersson 2009).

Fig. 3. One of the two Spillings silver hoards discovered in 1999 (Gotland Museum Id SPSK_003). Photo: Göran Ström, © Gotland Museum.

Both hoards contain a mixture of different ring types and bracelets which usually are not present on Gotland. Spiral-striated neckrings, ring money and broadband armrings of Hiberno-Norse type have their main distribution area in Southern Scandinavia, Scotland and Ireland (Thunmark-Nylén 2006:701ff). There are also fragments of ribbon-shaped mounts of probable Anglo-Saxon origin (Östergren 2009). From a craftsmen's perspective, it is interesting to note that the Spillings hoards contained about 250 specimens of the domestic Gotlandic horseshoe shaped bangles (Sw. *armbyglar*), which is also the earliest datable evidence. The uniformity in weight, shape and ornamentation of these objects might indicate their significance as currency in Gotlandic society (Kilger 2015b:38, tab. 1). Finally, both hoards contain an excep-

tionally large sum of fragmented dirhams. Out of 14 300 dirhams, 88 % were fragmented and weighed on average less than 1.5 grams. Hoards with such a concentration of minted small-size hack silver haven't been recorded, neither on Gotland nor elsewhere. This implies that the hack silver in both hoards was not valued piecemeal in bits and pieces but handled as a commodity in very large batches.

Big silver hoards like Spillings appear after c. 860 in Scandinavia and Russia. The significant concentration of silver in few individual finds might suggest that the handling of silver during this period was surveilled and controlled by a small number of players (Kilger 2008:240-1). The enormous amounts of hack silver in Spillings were probably not gathered on Gotland but acquired from a distant source outside Gotland. This is still a hypothetical suggestion and has to be evaluated in future studies. Another observation which might support this suggestion is that Spillings and other late 9th century hoards, many from northern Gotland, have a faint but special numismatic signature. They contain a small amount of late 9th century dirhams from Abbasid mints in the southern Caucasus which also are the terminal coins. Caucasian dirhams minted in the last quarter of the 9th century are almost absent on the Swedish mainland and other areas in Scandinavia (Kilger 2008:244-5).

This numismatic signature and the continued hoarding on Gotland during the late 9th century has to be seen in a wider global context. After c. 875, long-distance contacts from Scandinavia with Russia broke down and did not resume before the early 10th century. There are almost no silver hoards dated between ca. 875 and 900 in Scandinavia, the Baltic and beyond, which has led to a scholarly debate about the existence of a silver crisis in this period (e.g. Noonan 1985). Remarkably, Gotlandic networks were still able to acquire dirham silver somewhere in Eastern Europe when other networks failed.

When the evidence is considered collectively, I would like to argue that the owners of Spillings could be characterised as "entrepreneurs" in international trade, who acquired silver in different shapes from different sources. They were probably professionals who were able to maintain contacts over long distances, experts in managing different supply chains and skilled in handling silver in large and small units. When the numismatic and runic evidence is compared, it could be

argued that the Spillings hoards and the Pilgårds stone are related in terms of their exceptional character. That they originate from the same locality on Gotland is probably not a coincidence.

Conclusions

To conclude my short presentation, I would like to argue that hoarding represents not just material evidence for resilience within Gotlandic society. Silver hoards and their contents also demonstrate the ability of Gotlandic merchants to regroup and reorganise travels to changing destinations. They also prove the existence of a stable form of social organisation that facilitated long distance trading contact even during periods of crisis. A good example for this is the situation in the late 9th century when disaster seem to have affected the networks operating in Eastern Europe.

The evidence of two runic writing systems and their potential relation to trade may also indicate the ability of Gotlandic society to accumulate and to engage resources of different kinds. The ability to sustain specialists in writing, trading, and also other crafts also hints to the complexity of Gotlandic society during the Viking Age.

Finally, the thousands of coins buried in the hoards convey a powerful material message, an "evocative charge" of ideas, knowledge and practices once present on the island and acquired through long-distance interaction (Audy 2018:229). From a social perspective, island societies like Gotland were not backwaters, but at the forefront of trade and communication across the Viking world.

References

Adamczyk, D. 2014. *Silber und Macht. Fernhandel, Tribute und die piastische Herrschaftsbildung in nordosteuropäischer Perspektive (800–1100)*. Wiesbaden: Otto Harrassowitz.

Audy, F. 2018. *Suspended Value. Using Coins as Pendants in Viking-Age Scandinavia (c. AD 800–1140)*. Stockholm Studies in Archaeology 74. Stockholm: Stockholm University.

Ashby, S., Coutou, A. N. & Sindbaek, S. 2015. Urban Networks and Arctic Outlands: Craft Specialists and Reindeer Antler in Viking Towns. *European Journal of Archaeology* 18:4, pp. 679–704.

Christophersen, A. 1998. Runeinnskrifter fra Trondheim. Kronologi og kontekst. In: *Innskrifter og datering*, A. Dybdahl. & J. R. Hagland (eds.), Senter for middelalderstudier, vol. 8. Trondheim: Tapir, pp. 17–41.

Heijne, von C. 2004. *Särpräglat. Vikingatida och tidigmedeltida myntfynd från Danmark, Skåne, Blekinge och Halland (ca 800–1130)*. Stockholm Studies in Archaeology, vol. 31. Stockholm: Stockholm University.

Hillberg, V. 2016. Hedeby's demise in the late Viking Age. In: *New Aspects on Viking Age Urbanism, c. AD 750–1100: proceedings of the the international symposium at the Swedish History Museum, April 17–20th 2013,* L. Holmquist, S. Kalmring & C. Hedenstierna-Jonson (eds.). Stockholm: Archaeological Research Laboratory, Stockholm University, pp. 63–80.

Jonsson, K. 1990. The import of German Coins to Denmark and Sweden c. 920–990. In: *Sigtuna Papers: proceedings of the Sigtuna Symposium on Viking-Age Coinage 1–4 June 1989,* K. Jonsson & B. Malmer (eds.). Commentationes de nummis saeculorum IX–XI in Suecia repertis. Nova Series, vol. 6. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, pp. 139–143.

Jonsson, K. 2017. Början på slutet – Gandarveskatten ca 1060. In: *Arkeologi på Gotland 2: tillbakablickar och nya forskningsrön*, P. Wallin, H. Martinsson-Wallin, S. Sten & P. Widerström (eds.). Uppsala/Visby: Institutionen för arkeologi och antik historia, Uppsala universitet & Gotlands Museum, pp. 231–236.

Kilger, C. 2008. Kaupang from afar: aspects of the interpretation of dirham finds in Northern and Eastern Europe between the late 8th and early 10th centuries, In: *Means of Exchange: Dealing with Silver in the Viking Age*, D. Skre (ed.). Aarhus: Aarhus University Press, pp. 199–252.

Kilger, C. 2015a. Mitqal, Gewicht und Dirhems: Aspekte monetärer Praxis in der frühmittelalterlichen Silberökumene des Ostseeraums". In: *Fernhändler, Dynasten, Kleriker: Die piastische Herrschaft in kontinentalen Beziehungsgeflechten vom 10. bis zum fr|hen 13. Jahrhundert,* D. Adamczyk & N. Kersken (eds.). Wiesbaden: Deutsches Historisches Institut Warschau, 30. Harrassowitz Verlag, pp. 17–40.

Kilger, C. 2015b. Hoards and sinuous snakes. In: *Small Things wide Horizons. Studies in Honour of Birgitta Hårdh,* L. Larsson, L., F. Ekengren, B. Helgesson & B. Söderberg (eds.). Oxford: Archaeopress Archaeology, pp. 35–42.

Kilger in print. Silver hoards and Viking Age society on Gotland: Some thoughts on the relationship between

silver, long-distance trade and local communities. In: *Viking-Age Trade: Silver, Slaves and Gotland,* J. Sheperd et al. (eds.) [2021].

Källström, M. 2012. Gotlandic Picture Stones as Sources for Runology and the History of Scandinavian Languages. In: *Gotland's picture stones: bearers of an enigmatic legacy*, M. Herlin Karnell (ed.). Gotländskt Arkiv 84. Visby: Gotlands Museum, pp. 119–128.

Källström, M. 2014. Birka, Sigtuna och Medelpad – glimtar från tre vikingatida skriftmiljöer. In: *Vernacular Literacies – Past, Present and Future*, A.-C. Edlund, L.-E. Edlund & S. Haugen (eds.). Umeå: Umeå University and Royal Skyttean Society, pp. 107–124.

Noonan, T. 1985: The First major Silver Crisis in Russia and the Baltic. In: *Hikuin 11: [Festskrift om mønter til Brita Malmer]*, B. Malmer (ed.). Højbjerg: Forlaget Hikuin, pp. 41–50.

Östergren, M. 2009. Spillings. In: *The Spillings Hoard. Gotland's Role in Viking Age World Trade*, A.-M. Pettersson (ed.). Visby: Fornsalens Förlag, Gotlands Museum, pp. 11–40.

Peel, C. 2009. *Guta Lag. The Law of the Gotlanders*. Text series vol XIX. London: Viking Socety for Northern Research, University College of London.

Pettersson, A-M. 2009 (ed.). *The Spillings hoard. Gotland's role in Viking Age World Trade*. Visby: Fornsalens Förlag, Gotlands Museum.

Raffield, B., Greenlow, C., Price, N. & Collard, M. 2016. Ingroup identification, identity fusion and the formation of Viking warbands. *World Archaeology* 48:1, pp. 35–50.

Sindbæk, S. 2005. *Ruter og rutinisering. Vikingetidens fjernhandel i Nordeuropa*. København: Multivers.

Sindbæk, S. 2007. The Small World of the Vikings: Networks in Early Medieval Communication and Exchange. *Norwegian Archaeological Review* 40:1, pp. 59–74.

Thunmark-Nylén, L. 2006, *Die Wikingerzeit Gotlands*, vol. III:1–2. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien.

Westholm, G. 2009. Gotland and the surrounding world. In: *The Spillings Hoard. Gotland's Role in Viking Age World Trade*, A.-M. Pettersson (ed.). Visby: Fornsalens Förlag, Gotlands Museum, pp. 109–52.

Widmaier, J. & Diekmann, J. 2016. Ressourcennutzung als soziale Praxis auf der Ostseeinsel Gotland. *Mitteilungen der Deutschen Gesellschaft für Archäologie des Mittelalters und der Neuzeit* 29, pp. 37–54.

DARIUSZ ADAMCZYK

Did the Viking Age begin on the southern shore of the Baltic Sea?

Early Norse Trading Networks centred on Janów Pomorski/Truso

Introduction

> Historians use the term the Viking Age to describe the turbulent expansion of the Scandinavian people into Europe and Russia. Beginning in AD 793 with the Lindisfarne raid, Norwegians, Swedes and Danes set to raiding. Any unprotected community was a target. Vikings attacked places all along the coasts of Scotland, England, Ireland, France, Italy and inland Russia. They terrorized, plundered, traded, explored and finally settled and farmed all over the lands they encountered. (https://www.historyonthenet.com/the-viking-age-an-overview/).

This quotation reflects a collective perception of the beginning of the Viking Age. It is striking that, firstly, one event (like the attack on Lindisfarne or other monasteries), even if symbolic, should depict a "birth" of a whole historical age; and it is striking, secondly, that the Viking Age is said to have started with a raid and commonly associated with plundering and the use of violence. It is important to consider, however, whether "political" events can explain social and cultural transformations (Brather 2003). Accordingly, we have to ask what archaeology and numismatics tell us about the century between 750 and 850.

In this essay I will try to provide some thoughts on the very origins of the Viking phenomenon from a non-Scandinavian perspective, encompassing the other side of the Baltic Sea in order to examine whether commercial and economic networks existed there before the beginning of Viking raids and to what extent could have motivated the early raiders. In other words, was the Baltic a catalyst for social and economic change and expansion as suggested by Hedenstierna-Jonson in this volume?

In the second half of the 8th or by the early 9th century several 'emporia', 'ports of trade' or trading places, so-called 'Seehandelsplätze', emerged along the southern coast of the Baltic Sea. From East to West we note Staraja Ladoga, Janów Pomorski/Truso, Menzlin, Rostock-Dierkow and Groß Strömkendorf (Fig. 1).

These sites are characterised by two features: people who lived there primarily engaged in commerce and craft, and these settlements were inhabited not only by the Slavic, Baltic and Finno-Ugric population but also (or mostly) by foreigners, mainly from Scandinavia.

One of the biggest and most important trading places emerged on lake Drużno, just a few kilometres from Elbląg. The emporium at Janów Pomorski encompassed 15–18 ha and has been identified as Truso, well-known from Wulfstan's late-9th century (880/890) account. Different types of brooches, Hnefi game stones, gold and silver finger-rings as well as Valkyrie figures indicate a Norse presence there. Further more, craft activities typical of Viking societies are attested by small hammers, anvils, files, pins, melting pots and unfinished amber products. Glass and horn items, among others, were also manufactured. The style of buildings is characteristic of Scandinavian ethnic and cultural circles. Thus, there can be little doubts that at this time the harbour of Janów Pomorski was mostly inhabited by Norsemen (Jagodziński 1988; Jagodziński 2009b; Jagodziński 2010). On the other hand, pottery found in more peripheral parts of the emporium clearly shows that several settlers belonged to the indigenous Prussian population, and others may have originated from East Slavic territories on the west bank of the Dnepr and Don (Auch, Bogucki, Trzeciecki 2012:151).

But where did the Norsemen come from? Marek F. Jagodziński, who has excavated the site at Janów Pomorski, registers several artefacts from the early phase of the settlement: a bronze equilateral clasp made in Vendel style as well as a bronze buckle clasp and a bronze belt element – both with Esta-style details that are characteristic of the 8th century. Equilateral clasps of JP-58-Ljones style and an equilateral clasp of JP 80 type (Tanumtypen) may have been produced in the first half of the 9th century. Moreover, the Ljones style clasps found in Janów Pomorski are decorated by a special lace ornament and have parallels with finds from burials in Norway, Sweden, Finland, Russia and the southwestern Baltic coast. Some artefacts are generally typical for the 9th century. For exam-

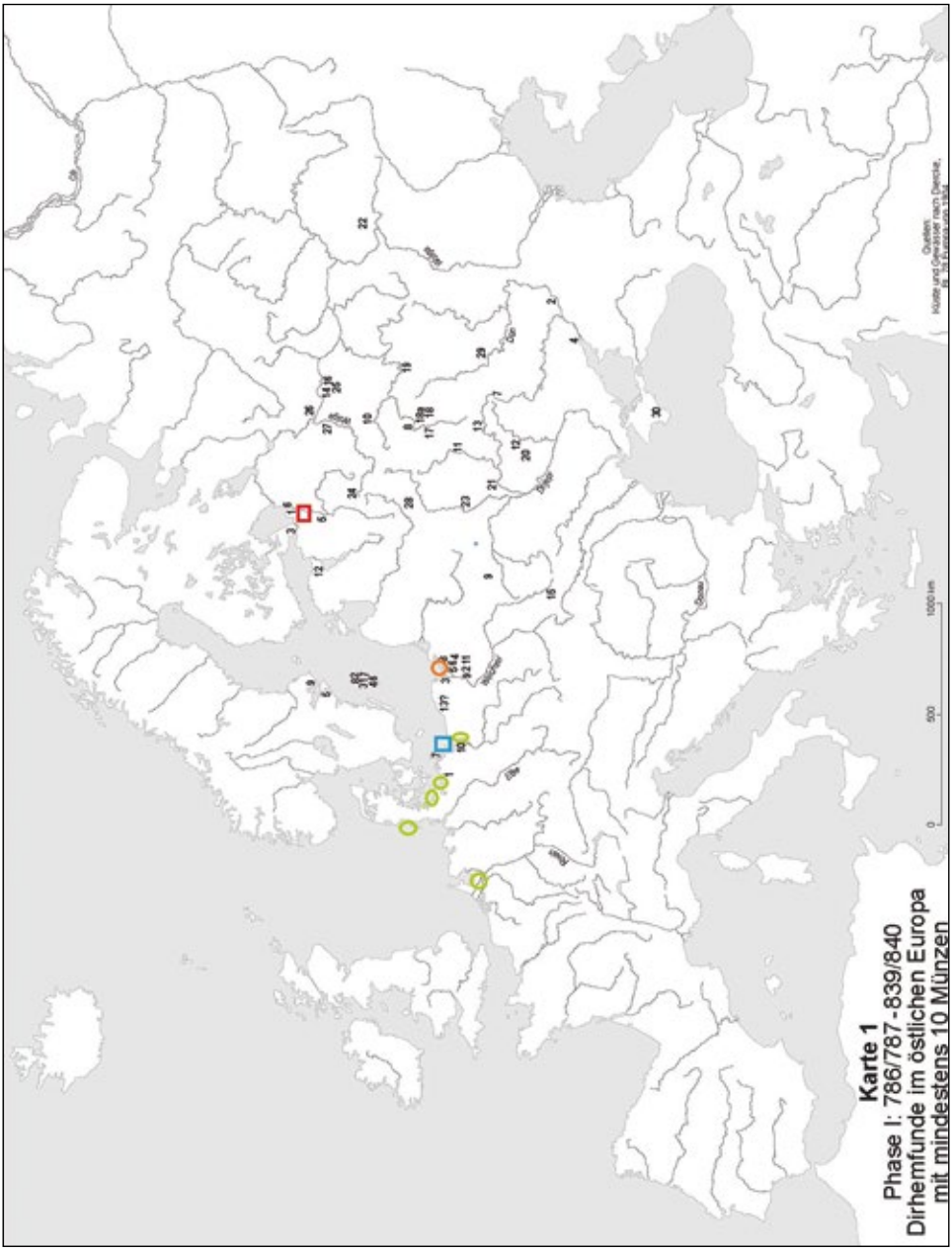


Fig. 1: Trading places and strongholds with several early coins (based on Adamczyk 2014, p. 67). *Orange circle:* Janów Pomorski/Truso; *blue square:* the stronghold of Arkona; *green circle:* other trading places; in the East Staraja Ladoga *red square*; numbers: early dirham hoards. Map: © Dariusz Adamczyk.

ple, an oval clasp (JP 22), classified by Jagodziński as belonging to group D of Berdal style, closely parallels an example from Jutland (Jagodziński 2009b:184, 186). One group of artefacts – combs with strong similarities to Hedeby, Birka, Århus, Ralswiek, Dorestad and Staraja Ladoga, seem to have been produced in the 9th/10th centuries (Jagodziński 2009b:186). This evidence indicates that Truso was founded by Norsemen who might have come from various parts of Scandinavia. However, Jagodziński (and others) argues for a Danish origin for the settlement, emphasising the nature of the artefacts as well as the layout of emporium, which parallels Hedeby and Ribe (Jagodziński 2009b:193). Interestingly, the archaeological evidence from the burial grounds of Elbląg-Pole Nowomiejskie, about 8 kilometres northwest from Janów Pomorski, clearly shows Gotlandic and Upplandic influence and dates to the 8th and 9th centuries (Jagodziński 2009a:175, 177; Neugebauer 1968:224). Unfortunately, we do not know much about the contacts between the emporium of Janów Pomorski and the community from the vicinity of Elbląg. The latter seems to have been older. Subsequently, this raises the question as to whether there were Norsemen from Gotland and/or Uppland who settled in Elbląg and founded Truso? Similar artefacts to those found in Elbląg are also known from Grobina, nearly 400 kilometres north-east from Truso, possibly indicating that a Gotlandic-Upplandic "colony" existed in Latvia between 600 and 800/850 (Nerman 1958; Žulkus & Bertašius 2009:199). Did the Scandinavians from Grobina establish the settlement of Truso after they had left their "colony" in Latvia in around 800?

Whoever founded Truso must have established the long-distance, cross-continental trading contacts that are often considered as a characteristic feature of the Viking Age. The first Arabic coins (dirhams) began to flow into Warmia, Masuria and the eastern parts of Pomerania during the early 9th century; these were mostly struck by the Abbasids in Iraq and Iran, but had some older coins mixed in. The Norsemen's role in redistributing these early dirhams along the southern shores of the Baltic can be seen from the finds of single coins or coin fragments at Truso. In addition to 996 dirhams (987 fragmented), thirteen deniers, sceattas or pennies from Hedeby, Ribe, Frisia, the Frankish and Anglo-Saxon realms (Northumbria and Wessex) have been found, all of which were struck before 870 (*Frühmittelalterliche Münzfunde* 2016 no. 19A and 19B).

A small hoard of 16 dirhams with a terminus post quem 815/816 has also been found inside the emporium (*Frühmittelalterliche Münzfunde* 2016 no. 18). Finds of some 1,110 weights and a few scales, used to weigh silver fragments, emphasise the importance of trade at the emporium (Auch et al, 2012:121). A couple of coins seem to have been worn as necklaces or melted down and then re-used as ingots. The numismatic material from Janów Pomorski is outlined in Table 1.

TABLE 1: Numismatic material from Janów Pomorski

Number of single coins	1,009 (650/750-870)
Number of hoards	1 (815/816)
Time-span of coin inflow into Truso	800s–860s
Number of weights	1,110
Non-monetary silver	Ingots

The chronological composition of dirhams clearly shows that 96% of all stray finds were struck no later than 820 (Table 2). As such, most Arabic coins may have flowed to the settlement during the 810s and 820s. Just few dirhams seem to have arrived in Truso after 830.

TABLE 2: Chronological composition of dirham finds in Janów Pomorski.

Kind of find	until 770	770–820	820–870
Hoard 815/816 (11 dirhams determined)	4 = 36 %	7 = 64 %	-
Stray finds of dirhams (853 determined)	ca. 146 = 17 %	ca. 672 = 79 %	35 (among them 9 840–850 and just 2 850-870) = 4 %

The chronology differs for European coins: five sceatta from Ribe and Hedeby can be dated to 825–830, two Carolingian deniers of Louis the Pious date to c. 822–840 and one Eanred-styca originated in York between 810 and 840. Additionally, three specimens were issued after 840: one is a denier of Lothar I (840–855), another a penny of Ethelwulf

(839–858) struck in Rochester 845–848, and the last a styca of Ethelred II (840-848 or 854-862) from York. Consequently, European coins – in contrast to those from western and southern Scandinavia – circulated in Truso later than dirhams.

The unique position of Janów Pomorski/Truso is even more striking when we look at the finds in other early 'ports of trades' along the southern shores of the Baltic and the North Sea (Table 3). In Menzlin, in the mouth of the Piana, just 61 coins and nearly the same number of weights have been excavated; from Groß Strömkendorf/Reric more than 80 coins, most of them struck over the course of the 7th and 8th centuries, are known. From Ribe, 204 sceattas issued between 700 and 850 have been reported. In Dorestad, the most important emporium of the North Sea, archaeologists have excavated at least 375 sceattas and Carolingian deniers (Kleingärtner 2014:365–7; Coupland 2010:289; Feveile 2008:53–67).[1]

Moreover, 219 dirhams, mostly dated to the 8th and 9th century (but few specimens were minted by the early 10th century), are known from the stronghold of Arkona (Rügen), along with three fragments of Permian rings.[2] Thus, the stronghold of Arkona accumulated most early dirhams not found inside a "classical" trading place.

TABLE 3: Early coins in emporia and strongholds on the southern shores of the Baltic Sea and the North Sea

Emporium or stronghold	Number of coins
Menzlin	61 (59 dirhams and 2 stycas); 60 weights
Arkona (stronghold)	219 dirhams (most of them 8./9. centuries; few early 10. century); 3 fragments of Permian rings
Groß Strömkendorf	c. 82 coins (more than 40 sceattas, 7 Carolingian deniers, c. 35 dirhams: most struck in the 8./9. centuries).
Ribe	204 sceattas (700-850); and 4-7 dirhams melted together (780-790)
Dorestad	more than 375 sceattas and Carolingian deniers (750-860)

1 For the data from Groß Strömkendorf I would like to thank Ralf Wiechmann from the Numismatische Abteilung des Hamburger Museums.

2 For the data from Arkona I would like to thank Freddy Ruchhöft who has taken part in excavation there for years.

Several dirham hoards dating from the 810s, 820s and 840s have been found in the vicinity of the emporium at Janów Pomorski (Table 4). Obviously, these Norsemen created a trading network which linked up the main centre for dirham redistribution in north-western Rus', Staraja Ladoga, with the Baltic and Slavic societies who populated the interior of Warmia, Masuria and eastern Pomerania. The hoard find spots are all roughly within a 100 kilometres radius of Truso: Gdańsk lies around 70 kilometres north-west of Elbląg, Mokajmy-Sójki and Zalewo between 30–40 kilometres to the south, Braniewo some 40 kilometres to the east, and the most remote deposit from Ramsowo is around 110 kilometres south-east of Truso (Table 4).

TABLE 4: Hoards with at least 10 coins from Janów Pomorski and its hinterland.

Find-spot	Terminus post quem of hoard	Number of dirhams or dirham fragments
Zalewo	811/812	40
Stegna	811/812	17
Krasnołąka	813/814	10
Janów Pomorski I	815/816	16
Braniewo	816/817	47
Mokajmy-Sójki	817/818	124
Ramsowo	828/829	336
Gdańsk – vicinity	849/850	22

The location of these early dirham hoards and the context of the archaeological finds from Janów Pomorski lead us to believe that the emporium's main role was the exchange of dirhams and dirham fragments for raw materials from the Slavic and Baltic Prussian hinterland (Fig. 2). These in turn could either be used by the inhabitants of Truso, or re-exported to the Arab world via the networks of Rus and other Norse groups living in the lands of northern Rus.

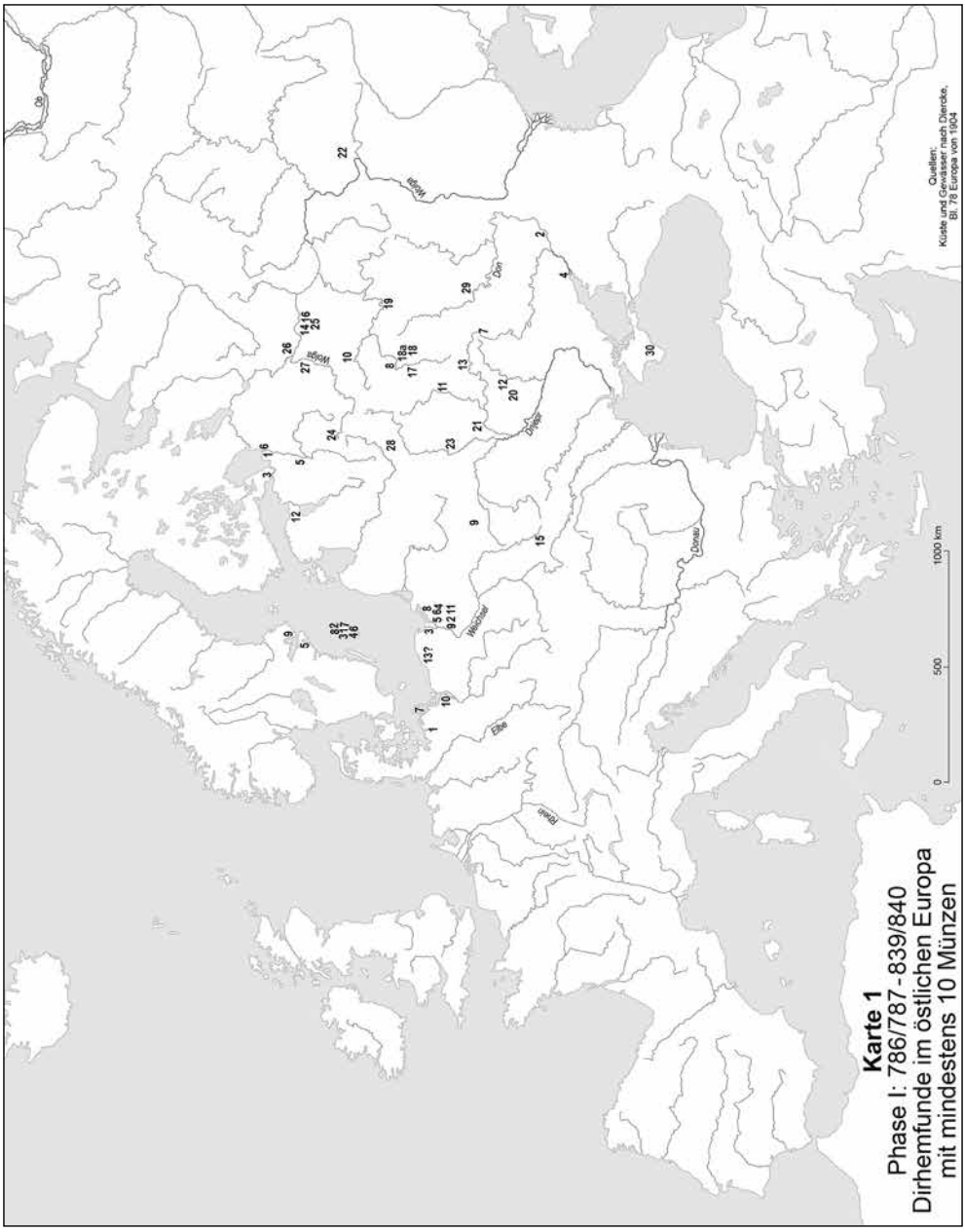


Fig. 2. Early dirham hoards in eastern and northern Europe. After Adamczyk 2014:67.

The raw materials included amber, salt, iron and beaver furs – possibly also slaves – and later on swords manufactured at Truso (Biborski et al. 2010). These are the sorts of goods that the Persian geographer Ibn Khurradadbih notes in his description of the Rus' trading expeditions to the markets in Khazaria, the Caspian Sea and even Baghdad as early as the 840s (and probably based upon earlier sources); (Źródła 1956). Thus, demand for furs, ambers, swords and slaves in the Abbasid caliphate and Staraja Ladoga was the main reason for the appearance of dirhams in the southern Baltic.

But why did various ethnic groupings in the hinterland of Truso collect Arabic silver? Wulfstan gives us a hint in his description of the funeral rites of an Old Prussian chieftain:

> Then the same day that they wish to carry him to the funeral pyre, they then divided up his property (or money), what there is left over after the drinking and the entertainment, into five or six parts, sometimes into more, according to the amount of property there is (Wulfstan's Voyage [2009]:16, 24–5).

Dirhams and dirham fragments may have held prestige and ritual functions and the description is reminiscent of the potlach. During this gift-giving ceremony, common to the indigenous peoples of the Pacific Northwest coast of North America, members of the elite would redistribute or destroy their property in order to maintain or strengthen their own social status. By redistributing goods, social ties could be reinforced particularly within a kinship group (Mauss 1990). The collapse of demand for silver in Truso's hinterland around 830 could be interpreted as a saturation of 'the prestige market' after only a generation.

The Scandinavians of Truso used silver not only to pay for raw materials from the hinterland, but also as money along the trade routes between Staraja Ladoga and the various settlements to the west of Janów Pomorski. Scandinavian and Slavic merchants from the western Baltic clearly visited Truso: Wulfstan himself is thought to have been a seafarer of Anglo-Saxon origin, who had sailed to Truso via Hedeby in *c.* 880/890, and pottery characteristic of Pomerania and Mecklenburg has been been found in Janów Pomorski (Auch et al. 2012). The concentration of early dirham hoards in the area together with the

number of single coin finds in Janów Pomorski suggest that in the first phase of the silver inflow this emporium was a key nodal point for the surrounding communities. These included settlements such as Kołobrzeg (Kolberg), Menzlin, Ralswiek, Dierkow-Rostock and Reric (Groß Strömkendorf). Many of the dirhams found in Pomerania and Mecklenburg could have been purchased in Truso.

The absence of dirham hoards in the Prussian hinterland after 830 and in eastern Pomerania after 850, in addition to that of single coin finds inside the emporium after c. 870 (but basically after 850), implies a deep shift in the silver distribution within the Baltic region (Adamczyk 2014:102-121). This does not mean, however, that coins and coin fragments stopped circulating in Truso during the second half of the 9th century. 98 % of all dirhams found inside the port of trade appear in the form of fragments. We should also add 1,100 weights. From those which have been examined, more than 50 % are so-called cubo-octahedral, while several are spheroidal. According to the common chronology such weights started to operate in Birka and Torksey by the 860s/870s (Steuer 1987; Kilger 2015:21). If we assume the same chronology for Janów Pomorski we can safely say that dirhams, which had flowed to Truso in the early 9th century, were still being used by Norse traders and craftsmen after 860.

A striking reorientation in western Eurasian dirham flows – away from the Khazar khaganate and the southern Baltic and into to northern Rus and Scandinavia, took place in around 830. Nearly 90% of all Baltic hoards (without Lithuania, Latvia and Estonia) dating from 833/834 onwards have been found in Scandinavia, primarily Gotland, in contrast to those dating from the first three decades of the century, when the figure was a barely 30 % (Table 5). Inflows of silver to Truso and other trading places in Pomerania or Mecklenburg decreased significantly. The only find we have in Pomerania between 850 and 900 has a *tpq* of the later 860s and was buried in Karnice, some 50 kilometres south-west of the Slav-Scandinavian settlement near Kołobrzeg (Kolberg) and 300 kilometres west of Janów Pomorski; and only a few hoards from this period have been excavated in Mecklenburg and on the island of Rügen (Adamczyk 2014:104; Table 5).

TABLE 5: Number of silver hoards with at least 10 coins from the southern shores of the Baltic Sea (Warmia, Masuria, Pomerania, Mecklenburgia) and Scandinavia.

Terminus post quem of hoard	Southern shores of the Baltic	Scandinavia
803–831/832	12 (7 in Truso or its hinterland)	5 (all in Sweden, 4 in Gotland)
833/834–846/847	2	11 (8 in Sweden, 7 in Gotland)
849/850–857/858	1 (hinterland of Truso)	9 (5 in Sweden, 1 in Gotland)
859/860–877	2	20 (19 in Sweden, 13 in Gotland)
880/881–896/897	1	10 (10 in Sweden, 7 in Gotland)

In order to explain this shift, we need to look at external as well as internal factors, and Wulfstan may have light to shed on the latter:

> The above-mentioned Estland is very large, and there is very many a town (or stronghold), and in each town there is a king […] There is very much (or great) conflict between them (Wulfstan' Voyage [2009]:16).

He seems to be describing internecine warfare between local warlords. Unfortunately, we do not know the cause of these conflicts. They could have been triggered by dealings with the Norsemen of Truso and their demand for slaves, or by a range of internal political, economic, demographic, environmental and social pressures. This seems to have been the case in Middle Pomerania, where a transformation from larger settlements to smaller hill forts (so-called Ringwälle) dominated by local warlords had taken place by the later 9th century (Łosiński 1981). It is, however, no coincidence that finds of late-9th and 10th century Frankish swords have been made in Prussia (Steuer 1987:154, 157). Silver would seem to have been replaced by 'high-tech' Viking Age weaponry. One final factor affecting inflows of Islamic silver could have been a change in the attitude of Prussian and Slavic chieftains them-

selves, possibly reflecting the effect of precious metals on their clans. But whatever the reasons, hoarders who had earlier collected coins no longer seem to have needed dirhams.

Turning to external factors, we have some evidence of Viking raids on the southern Baltic in the mid-9th century from the *Vita Anskarii*. Rimbert reports that bands of Danes, dissatisfied with the tribute they had just collected at the emporium of Birka, attacked a Slavic stronghold in 845 or 849 and seized 'loot and many treasures' (*captis in ea spoliis ac thesauris multisi*); (Rimbert [1973]:62–63). In 852, the Danes tried to plunder the Curonians (in what is today Latvia and Lithuania) but were vanquished. Shortly after, the Swedish king Olof raided the same Curonians, but unlike the Danes he was able to defeat them. According to the *Vita Anskarii*, Olof forced them to pay tribute in the form of 7,500 pounds of silver, equivalent to about 500,000 dirhams (Rimbert [1973]:94–99). Although we cannot take the amounts mentioned at face value, these stories nevertheless illustrate Scandinavian pillaging of the Slavic and Baltic communities and the extortion from them, among other things, of silver. This could explain why only a very few hoards from the second half of the 9th century have been found in Pomerania and Prussia.

However, we do not have any archaeological evidence to indicate that the settlement at Truso was attacked by the Vikings during the 9th century. We must therefore look for other explanations, such as a growing demand for silver in Sweden. Were there new groupings of Norsemen who between the 830s/840s and 860s/870s took control of the settlement of Staraja Ladoga – a nodal point for dirham flows in northern Russia – and in this way gained access to the Eastern European interior? Why did the demand for precious metals increase in Scandinavia? Who were the people accumulating Arabic silver?

Whatever the case may be, this great reorientation of silver flows away from the southern shores of the Baltic Sea to Scandinavia seems to have represented not the beginning of the Viking Age, but rather a second stage of Norse activity undertaken by new bands which sought fame and silver and used violence more frequently and systematically than their predecessors in order to obtain it.

References

PRIMARY SOURCES

Frühmittelalterliche Münzfunde = Frühmittelalterliche Münzfunde aus Polen. Vol. 5: Ermland und Masuren. M, Bogucki, P., Ilisch, D. Malarczyk, M. Kulesza, J. Piniński & T. Nowakiewicz (eds.). 2016. Warszawa: Institut für Archäologie und Ethnologie der Polnischen Akademie der Wissenschaften / Numismatische Kommission der Länder in der Bundesrepublik Deutschland.

Rimbert. Cited from: *Rimberts Vita Anskarii. Ausgewählte Quellen zur deutschen Geschichte des Mittelalters. Freiherr vom Stein-Gedächtnisausgabe*, R. Buchner & W. Trillmich (ed.). 1973. Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 15–133.

Wulfstan's Voyage. Cited from: *Wulfstan's Voyage and his Description of Estland: The Text and the Language of the Text*. J. Bately (ed). 2009. In: *Wulfstan's Voyage. The Baltic Sea Region in the Early Viking Age as seen from Shipboard*, A. Englert & A. Trakadas (eds.). Roskilde: Viking Ship Museum, pp. 14–28.

Źródła = Źródła arabskie do dziejów Słowiańszczyzny. 1956. T. Lewicki (ed.). vol. 1. Wrocław: Zakład im. Ossolińskich.

SECONDARY LITERATURE

Adamczyk, D. 2014. *Silber und Macht. Fernhandel, Tribute und die piastische Herrschaftsbildung in nordosteuropäischer Perspektive (800–1100)*. Wiesbaden: Harrassowitz.

Auch, M. Bogucki, M. & Trzeciecki, M. 2012. Osadnictwo wczesnośredniowieczne na stanowisku Janów Pomorski 1. In: *Janów Pomorski. Stan 1. Wyniki ratowniczych badań archeologicznych w latach 2007–2008, vol. 1 (2): Od późnego okresu wędrówek ludów do nowożytności*, M. Bogucki & B. Jurkiewicz (ed.). Elbląg: Muzeum Archeologiczno-Historyczne, pp. 23–232.

Brather, S. 2003. Lindisfarne 793 als Beginn der Wikingerzeit? Kulturentwicklung und Ereignisgeschichte im Vergleich. *Zeitschrift für Archäologie des Mittelalters 31*, pp. 39–60.

Biborski, M. et al. 2010. Sword parts from a Viking Age Emporium of Truso in Prussia. *Waffen- und Kostümkunde. Zeitschrift für Waffen- und Kleidungsstücke* 52/1, pp. 19–70.

Bogucki, M. 2007. Coin Finds in the Viking-Age Emporium at Janów Pomorski (Truso) and the Prussian Phenomenon. In: *Money Circulation in Antiquity, the Middle Ages and Modern Times. Time, Range, Intensity*, S. Suchodolski (ed.) (with the collaboration of M. Bogucki). Warsaw-Cracow: Avalon, pp. 79–108.

Coupland, S. 2010. Carolingian Single Finds and the Economy of the Early 9th Century. *The Numismatic Cronicle* 170, pp. 287–319.

Feveile, C. 2008. Series X and Coin Circulation in Ribe. In: *Studies in Early Medieval Coinage, vol. 1: Two decades of discovery*, T. Abramson (ed). Woodbridge: Boydell & Brewer, pp. 53–67.

Jagodziński, M. F. 1988. *Wczesnośredniowieczna osada rzemieślniczo-handlowa w Janowie Pomorskim nad jeziorem Drużno – poszukiwane Truso?* Elbląg: Muzeum w Elblągu.

Jagodziński, M. F. 2009a. Zagadnienie obecności Skandynawów w rejonie ujścia Wisły we wczesnym średniowieczu. *Pruthenia* 4, pp. 117–192.

Jagodziński, M. F. 2009b. The Settlement of Truso. In: *Wulfstan's Voyage. The Baltic Sea Region in the Early Viking Age as seen from Shipboard*, A. Englert & A. Trakadas (eds.). Roskilde: The Viking Ship Museum, pp. 182–197.

Jagodziński, M. F. 2010. *Truso. Między Weonodlandem a Witlandem*. Elbląg: Muzeum Archeologiczno-Historyczne w Elblągu.

Kilger, C. 2015. Mitqal, Gewichte und Dirhems – Aspekte monetärer Praxis in der frühmittelalterlichen Silberökumene des Ostseeraumes. In: *Fernhändler, Dynasten, Kleriker. Die piastische Herrschaft in kontinentalen Beziehungsgeflechten vom 10. bis zum frühen 13. Jahrhundert*, D. Adamczyk & N. Kersken. Wiesbaden: Harrassowitz, pp. 17–40.

Kleingärtner, S. 2014. *Die frühe Phase der Urbanisierung an der südlichen Ostseeküste im ersten nachchristlichen Jahrtausend.* Studien zur Siedlungsgeschichte und Archäologie der Ostseegebiete, Bd. 13. Neumünster: Wachholtz.

Łosiński, W. 1981. Aktualne problemy badań archeologicznych nad wczesnym średniowieczem Pomorza, *Pomorania Antiqua* X, pp. 131–154.

Mauss, M. 1990. *Die Gabe. Form und Funktion des Austauschs in archaischen Gesellschaften*. Frankfurt am Main: Suhrkamp.

Nerman, B. 1958. *Grobin-Seeburg: Ausgrabungen und Funde*. Stockholm: Almqvist & Wiksell.

Neugebauer, W. 1968. Truso und Elbing, ein Beitrag zur Frühgeschichte des Weichselmündungsgebietes. In: *Studien zur europäischen Vor- und Frühgeschichte*. M. Claus, W. Haarnagel & K. Raddatz (eds.). Neumünster: Karl Wachholtz Verlag, pp. 222–233.

Steuer, H. 1987. Gewichtsgeldwirtschaft im frühgeschichtlichen Europa – Feinwaagen und Gewichte als Quelle zur Währungsgeschichte. In: *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa*, Teil IV (156), K. Düwel et al. (eds.). Göttingen: Vandenhoeck & Ruprecht, pp. 405–527.

Žulkus, V. & Bertašius, M. 2009. Handelsplätze zwischen Danziger und Rigaer Bucht zur Zeit Wulfstans. In: *Wulfstan's Voyage. The Baltic Sea Region in the Early Viking Age as seen from Shipboard,* A. Englert & A. Trakadas (eds.). Roskilde: The Viking Ship Museum, pp. 198–204.

NY BJÖRN GUSTAFSSON

On the significance of coastal free zones and foreign tongues. Tracing cultural interchange in early medieval Gotland

Introduction

The basis for the following thoughts and hypotheses mainly developed while I completed my doctoral thesis. In this research, I utilised the rich finds from more than 40 years of Gotlandic metal-detector surveys in order to better understand local non-ferrous metalworking in the early medieval period (Gustafsson 2013). One of my key presumptions was that the production of dress jewellery, like any other piece of material culture, can provide vital insights on how social identities are formed, transformed and upheld within a given society. Gotland is well suited for such studies. Despite its location close to the Swedish mainland (c. 85 kilometres), the island developed and upheld an endemic version of the Scandinavian early medieval cultural concept. The clearly-defined geographical boundaries of Gotland also added to its suitability. But, regardless of this, it was the metal-detector finds which were truly critical for the outcome since they made it possible to venture beyond previous hypotheses. Indeed, I would argue that Gotland has the most solid empirical base in Sweden for research on early material culture, since the metal-detector surveys have yielded an increased understanding of the geographical and spatial distribution of many find types. This allows us to move beyond the study of single finds and instead interpret clusters and visible trends within the material record.

However, there is always a certain element of killing your darlings when pulling a dissertation together. Some immensely interesting strings must be left annoyingly untied. Over the last years I have done my best to tie up some of these (cf. Gustafsson 2016 & 2017, Gustafsson & Östergren 2019), but in the following pages I will discuss a truly monumental untied thread: the interplay between Gotland and the outside world or, quite frankly, how Gotland managed to uphold its own cultural traditions in a world of ever-increasing interactions.

Elements of insular seclusion

Up until the 12th century, the deliberate 'otherness' of Gotland is especially visible through insular dress jewellery, most notably brooches but also as a wide array of local pendants. Signature artefacts of the pan-Scandinavian majority culture like oval broches are, on the other hand, all but absent. It is important to firmly point out that this cannot simply be explained by physical isolation – Gotland has never been cut off in any vital sense, rather the opposite. The island's lack of natural resources, if nothing else, might hold a vital clue to this complex issue. In the 12th century sedentary stone became a requested commodity, but prior to that the island had little to offer beyond cattle, wool, fish and possibly tar. All metals, regardless if they were intended for jewellery, weapons or tools, had to be imported, as did the antler for comb-making since there were no cervids on the island. It is evident that large quantities of copper alloy were needed to meet the local demand for local, identity-accentuating dress jewellery. Ironically, the Gotlanders were thus strictly dependent on the outside world for the materials needed to display their cultural otherness. Despite or probably as a consequence of this, the Gotlanders managed to establish themselves as key stakeholders in interregional trading networks.

Reaching out

The Gotlandic archaeological record clearly shows that the population was successful in both developing a local identity and, evidently, attaining the means to maintain it. This enables studies of their interaction with surrounding societies and how this continued for several centuries without leading to cultural assimilation. This resilience was discussed by Lena Thunmark-Nylén in 1985. She chose to call it *the Gotland Paradox* and concluded that it was a result of a local need to go beyond the island to attain necessary commodities. Non-Gotlanders, on the other hand, had no clear reasons to go there; according to Thunmark-Nylén, all social interplay thus occurred away from Gotland, where only a few traders were exposed to non-Gotlandic culture (Thunmark-Nylén 1985). The Gotlandic Paradox is indeed still of interest – but I have previously (Gustafsson 2013:17 f) argued that the situation must have been more nuanced. My main objection lay in that Thunmark-Nylén saw cultural differences as a sign of isolation. However, in cultural anthro-

pology it has long-been acknowledged that differences in material culture can develop as an antithesis to isolation, accentuating cultural affinity along border zones (e.g. Barth 1969 and Raffield in the present volume). Even though Gotland is indeed 'beyond the horizon' from a mainland-Scandinavian perspective, that does not mean that it was secluded, especially in a world where water was a connecting factor. I think that it is quite safe to assume that Gotlanders were firmly aware of the cultural traits of the surrounding areas. Conversely, if you sailed the Baltic Sea, you knew where and what Gotland was.

But as with all cultural expressions, Gotlandic identity was not static. Rather, various other traits and trends came to influence it over time. I have already mentioned the occurrence of pan-Scandinavian art styles and motifs. These are evident signs that Gotland was a part of the social web of early medieval Scandinavia. Just like on the Scandinavian mainland, the animal styles of the Vendel- and Viking Periods appear on personal objects such as dress jewellery and weapons, yet again, after a Gotlandic fashion. This seems to imply that the islanders knew perfectly well how these designs were used off the island, but they did not let that get in the way of adjusting them into versions fit for a local taste. Gotland was far from cut off.

Just as in any insular society, harbours were fundamental. On Gotland, such sites have been a focus for archaeological research since the beginning of the 20th century (e.g. Munthe 1948; Hansson 1967; Lundström 1968, 1971; Olsson 1985; Carlsson 1987, 1999a). It has recently been estimated that c. 60 harbour sites existed along the coast (Carlsson 2011:22). Most of these were small-scale facilities, presumably analogous to the many late-medieval and early-modern fishing hamlets along the coast. These saw periodic use during fishing seasons and mostly, due to the shallow beaches, lacked permanent installations for mooring. Instead, boats were hauled directly on the beaches, sometimes aided by simple jetty structures of cleared rocks.

Towards larger harbours

While most of these sites were small and limited by the local topography, there were a few more developed harbours with permanent piers and jetties of wood and stones that were capable of accommodating larger vessels. Normally only the stones survive, but remains of wooden

constructions have been found at a couple of sites and thus enabled more precise dating by means of dendrochronology (cf. Carlsson 2011). These harbours seem to have developed during the first half of the 11th century and the majority are located to the west coast, presumably due to the lay-out of one of the main early sea routes from the mainland. It followed the Swedish coast up until the northern point of Öland and then east, probably with the Karlsö-islands as landmarks and then northbound along the coast. Three such harbours were located in Fröjel, Västergarn and Visby. Today these sites survive very differently. The Fröjel settlement is mainly situated in a pasture while Västergarn is partly covered by a small village. Visby, finally, is the capital of the island and a UNESCO World Heritage site. Despite their current differences, however, these three larger harbours ought to be treated as linked and possibly rendered by the same development, a development which made Gotland – or at least its coastline – a concern for others than Gotlanders alone.

The advent of the many tongued peoples

The archaeological record is the main source for understanding early Gotland, but written accounts dating to the medieval period survive here and there. The foremost of these is without doubt the *Guta Lag* – the Law of the Gotlanders. It is considered to have been written down in the first quarter of the 13th century (Peel in *Guta lag* [2009]: xxxix). The law, together with an appendix popularly known as the *Guta Saga* (*Guta saga* [1999]), includes a wealth of information, some of which, especially in the latter, is evidently mythical. Even so, when the more fantastic accounts are filtered out, enough remains to make it an invaluable resource for studies of early Gotland. There is another very important written account, though, which can be found in the introduction of the sole surviving copy of the Town Law of Visby. Even though Visby had broken free from Gotlandic society by the 14th century, its previous history was evidently of importance for the legislators. The passage begins as follows (translation by the author after Collin & Schlyter, see *Codices iuris Visbyensis urbici et maritimi* [1853]:21):

> "Let it be known that when people of many tongues gathered on Gotland, they swore the peace that all around the coastline each and every one should be granted eight fathoms of land for to better salvage their goods, be there field or meadow. Also, he who anchored by the coast was to come under the same sworn peace."

The text then goes on to describe how civil unrest followed as the town – Visby – grew. The way in which these events are described leaves little doubt that Germans formed one side in this conflict. It is further said that the troubles were solved by Henry the Lion, Duke of Saxony and Bavaria, when he acknowledged the peace and rights granted to the Gotlanders by his grandfather, Emperor Lothar II. The mention of these two potentates provides a good indication of just when the town grew, and the troubles begun. Firstly: the treaty with Duke Henry is without doubt the so-called *Artlenburg Privilege* of 1161, which granted Gotlanders access to the German markets on equal terms with local merchants (cf. Bäärnhielm 1983). But the mention of Lothar II indicates that a similar agreement had in fact been active during or before 1137 when Lothar died. This is by no means a novelty in Gotlandic research – but it is of great interest to this study and I will get back to it later. Meanwhile, we shall return to the larger harbours.

Keeping up to changes

At this stage it might be good to recapitulate. Gotland has always been greatly dependent on its surrounding areas when it comes to attaining essential commodities and raw materials. This was probably a significant driving force behind the strong Gotlandic position in trading networks; to attain what you needed you had to have something to offer – or render yourself strong enough to take it by force. Classic Viking-period logic.

By the beginning of the 11th century, something appears to have changed in the trade and exchange patterns around the Baltic Rim. Suddenly, groups which had earlier taken a less active part in transporting commodities seem to have become increasingly major players in inter-regional trade. This new phase is made visible by a rise in Slavonic material culture at southern Swedish and Danish find sites. On Gotland, this shift seems to coincide with the development of the larger

harbours. The trend is particularly evident in Visby (Roslund 2001) but recent excavations at Västergarn have also yielded solid evidence for an early-mid 11th century phase of extended development (Carlsson 2011) and the presence of Slavonic material culture (Holmbäck 2017:70 f). It therefore seems as if the harbour settlements were adapted to facilitate foreign traders. Even though these large-scale developments must have been costly, it was evidently seen as worthwhile from a Gotlandic point of view. Thus, if the opportunity to create a necessary surplus was weakened by outside competition, the Gotlanders could still get what they wanted by offering good facilities where the competitors could interact with each other as well as their local counterparts. The location of these facilities on an island which lay more or less in the middle of the contemporary trade routes would have made them attractive places to do business.

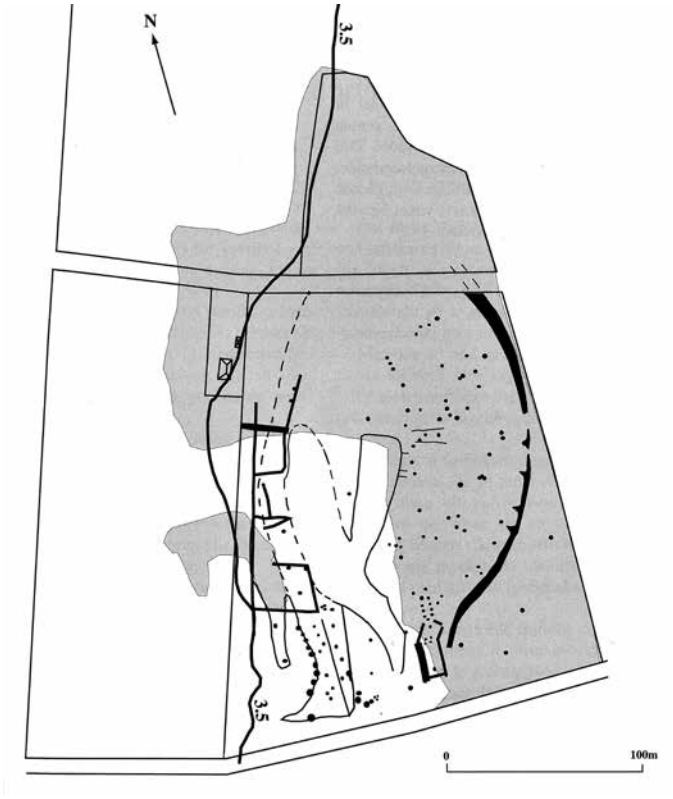
Unfree harbours on a free coast?

As mentioned above the old trade peace is said to have dictated that eight fathoms – c. 14 metres – along the coastline was a free zone for everyone. It is an interesting statement, but so is the implications gained through looking past it, towards the land that lay beyond the eight fathoms.

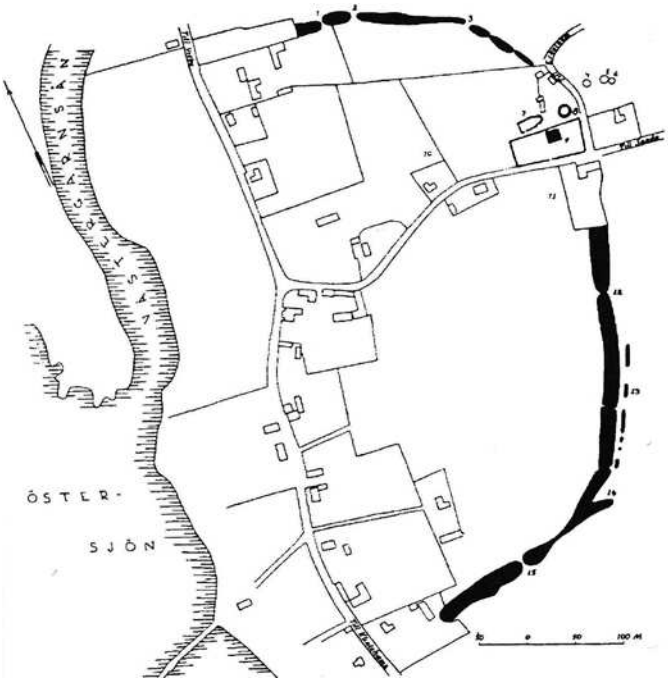
Given the evident lack of non-Gotlandic material culture on the island, it is quite possible that foreigners were forbidden or strictly advised not to travel further inland. The peace agreement might have kept them perfectly safe and well on the beach – but not beyond it. To offer 14 metres of land all around the c. 800 kilometres of Gotlandic coastline as a free zone might seem as extremely generous – but when the general shallowness and pebbled hostility of the coastline is included into the equation it is rather apparent that this agreement might have been called for by harsh necessity rather that local kindness. The coast is treacherous, and it is hardly a coincidence that these eight fathoms are described as intended for safely *salvaging* goods. After doing so, sitting on that narrow strip of beach you probably could not do much else than await rescue from your peers or ask assistance and protection of the local landholders – something which was probably an altogether different matter of negotiation.

So, what was the purpose of the eight fathoms-rule and why was it introduced at all? Without entering too far into the land of presumption it might be a deliberate act of marketing, an added reason to attract outside visitors. The local, early medieval society appears to have been uniform, secluded *and* well aware of trends and changes in the outside world. Conversely, it is not unreasonable to presume that people around the Baltic Sea held a similar preunderstanding of Gotland and knew it as a closed society, unimpressed by foreign influences and surrounded by an unforgiving coastline. Such a preunderstanding cannot have been an asset when things changed and Gotland, freely or through necessity, sought to open itself up to the outside world. The eight fathoms could thus have been introduced as a signal to potential visitors – "if things go wrong and you have to pull ashore outside your intended destination that is quite alright – just stick to the eight fathoms and no harm, at least no human harm, will come upon you". But what about these intended destinations on the Gotlandic coast – where were they situated? Well, the abovementioned larger harbours seem to be a rather probable conclusion. It is hardly surprising that the recovered finds from these sites largely speak of a heavy focus on production and trade and that they, on a general level, appear to be much more un-Gotlandic than normal inland settlements. In a recent study of larger emporia and proto-towns Sven Kalmring (2016) suggested that these sites ought to be understood as special economic zones which had more in common with each other than the areas in which they were situated. The larger Gotlandic harbours also show similar tendencies, at least for the abovementioned sites of Fröjel, Västergarn and Visby. All three of these sites feature evident or possible demarcations, i.e. possible physical boundaries which distinguish them from the surrounding areas (Fig. 1). In Fröjel there is a possible moat-like ditch (Carlsson 1999b:39), in Västergarn a still largely preserved semi-circular wall (e.g. Elfwendahl & Påhlsson 1990) and in Visby a semi-circular demarcation which is still visible in the layout of the medieval town plan (e.g. Schück 1924:6 ff; Falck 1969; Andersson 1976). Both the wall of Västergarn and the pattern in Visby's town plan have been discussed repeatedly in the past, but then mainly as defensive structures meant for protection. Even if this is only natural given the documented unrest of the early medieval period, I myself have become increasingly

A



B



C

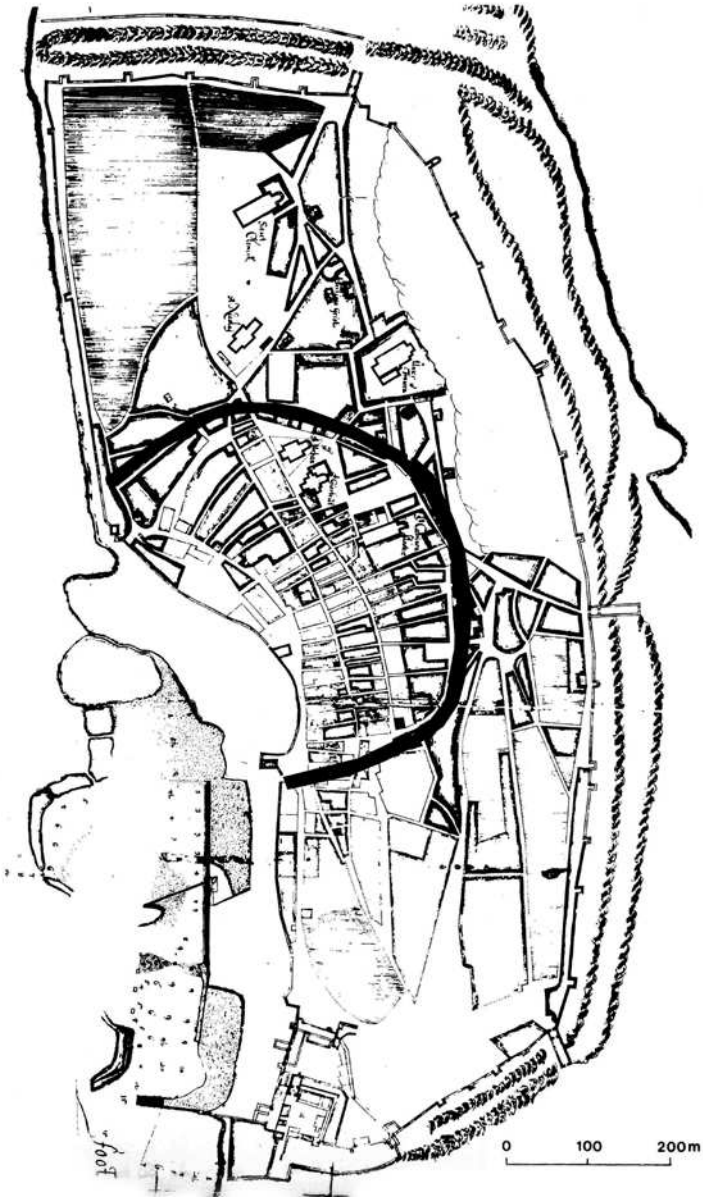


Fig. 1 Possible and actual physical demarcations at larger Gotlandic harbour sites.
A. Possible mout or deep ditch by the Fröjel harbour area (after Carlsson 1999b:39).
B. The Västergarn wall (after Carlsson 2011:79).
C. Layout of streets in the core of Visby (after Andersson 1976:60).

inclined to regard them in a more basic sense; walls and ditches are primarily dividers, demarking areas as being set aside for a specific purpose. If such a view is applied on the Gotlandic harbour sites they might, via these accentuated boundaries, have been rendered special in both a symbolic and practical sense. It is possible that they were local special economic zones.

When pondering this, it is also interesting to glance at number of more modern parallels of special economic zones – the east-Asian harbours connected to the East India trade of the 17th and 18th centuries. At these harbours, or rather harbour towns, Europeans interacted with local merchants. The driving force behind these communities was the need among local societies in China and Japan to access commodities and raw materials provided by the Europeans – but they had no interest in a broader cultural interchange. The Europeans were thus officially restricted from entering the surrounding areas and their presence was only allowed at certain specified areas in the harbours (Hellman 2015:19 ff). Even if these examples are distant in both time and space, I do regard them as highly interesting examples of how the basic thought behind the development of the larger Gotlandic harbours could have come about.

Future studies

In this paper I have, based on my research and general thoughts, tried to discuss some aspects of early medieval interaction between Gotlanders and people from the outside. It is very much a work in progress and I am still far from able to sufficiently tie-down this particular loose strand of research. There are several other issues which needs to be dealt with in greater detail in the future. One of these is the early harbour communities on islands off the Gotlandic coast such as the Karlsö islands. These were rather substantial, and excavations have shown that they were already present long before the 11th century. The northern settlement at Stora Karlsö, for example, has yielded finds that clearly indicate involvement in 9th century long-distance trade, which presumably connected Gotland with the northern Norwegian coast (Gustafsson 2017). Were these harbours predecessors of the later harbours on Gotland proper? It is possible – these islands lay within sight of Gotland, but they could have been utilised by non-Gotlanders to

establish outposts for safe interaction with Gotlandic envoys without risking goods and health (cf. Zachrisson 2009:45). Yet another hitherto unsolved matter is how this interplay, both before and after the early 11th century, connected to the ruling political and judicial body of early medieval Gotland – the Gutnal Thing. Based on accounts in the Law of the Gotlanders and the Guta Saga very little escaped their attention. And finally, in the end, this whole undertaking might also increase the understanding of a development which probably came about as a consequence of all this – the paramount cultural change in the middle of the 12th century when the Gotlanders rapidly came to discard their insular cultural traditions in favour of becoming fully-fledged continental Europeans.

References

Andersson, G. 1976. Visbys äldsta medeltid belyst av det arkeologiska materialet. *Gotländskt Arkiv* 48, pp. 41–63.

Barth, F. 1969. *Ethnic groups and boundaries. The social organization of culture difference*. Oslo: Universitetsforlaget.

Bäärnhielm, G. 1983. Artlenburgprivilegiet 1161. In: *Gutar och vikingar*, I. Jansson (ed.). Stockholm: Statens historiska museum, pp. 455–459.

Carlsson, D. 1987. Äldre hamnar – ett hotat kulturarv. *Fornvännen* 82, pp. 6–18.

Carlsson, D. 1999a. Vikingahamnar i Östersjöområdet. In: *Arkeologi i Norden* 2, G. Burenhult (ed.). Stockholm: Natur och kultur, pp. 484–493.

Carlsson, D. 1999b. »*Ridanäs*»: *vikingahamnen i Fröjel*. ArkeoDok Skrifter 2. Visby: ArkeoDok.

Carlsson, D. 2011. *Vikingatidens Västergarn: en komplicerad historia*. Stockholm: Books on Demand GmbH.

Codices iuris Visbyensis urbici et maritimi. Cited from: *Corpus iuris sueo-gotorum antiqui. Samling af Sweriges gamla lagar, på kongl. maj:ts nådigste befallning utgifven af d. C.J. Schlyter. Vol. 8, Codices iuris Visbyensis urbici et maritimi = Wisby stadslag och sjörätt.* Collin, H. S. & Schlyter, C. J. (eds.). 1853. Lund: Berlingska boktryckeriet.

Elfwendahl, M. & Påhlsson, I. 1990. *Arkeologi på Gotland: fyra undersökningar i Västergarn*. Arkeologiska skrifter nr 1989:1. Visby: RAGU.

Falck, W. 1969. Visby hamn och sjömuren. *Gotländskt Arkiv* 41, pp. 65–78.

Gustafsson, N. B. 2013. *Casting identities in central seclusion: aspects of non-ferrous metalworking and society on Gotland in the Early Medieval Period*. Theses and papers in scientific archaeology 15. Stockholm: Stockholm University.

Gustafsson, N. B. 2016. Från kogg till grotta: ett oväntat fynd från Stora Karlsö. *Fornvännen* 111, pp. 272–275.

Gustafsson, N. B. 2017. Från kust till kust – Gjuterifynden från Stora Förvar och Stora Karlsös roll i vikingatida fjärrhandel. In: *Arkeologi på Gotland 2 – Tillbakablickar och nya forskningsrön*, P. Wallin & H. Martinsson-Wallin (eds.). Visby: Uppsala universitet & Gotlands Museum, pp. 243–252.

Gustafsson, N. B. & Östergren, M. 2019. Weights and Values in the Gotlandic Heartland. *Lund Archaeological Review* 23, pp. 95–105.

Guta saga = Guta saga: the history of the Gotlanders. Peel, C. (ed.). 1999. Viking Society for Northern Research vol. XII. London: Viking Society for Northern Research, University College London.

Guta lag = Guta lag: the law of the Gotlanders. Peel, C. (ed.). 2009. Viking Society for Northern Research vol. XVIII. London: Viking Society for Northern Research, University College London.

Hansson, H. 1967. Gotländska tingshamnar. *Gotländskt Arkiv* 39, pp. 29–34.

Hellman, L. 2015. *Navigating the foreign quarters: everyday life of the Swedish East India Company employees in Canton and Macao 1730–1830.* Stockholm: Stockholm University.

Holmbäck, M. 2017. Öster i Väster: En studie av östersjökeramiken från Västergarn, Gotland. MA-thesis. Visby: Uppsala university Campus Gotland.

Kalmring, S. 2016. Early Northern Towns as Special Economic Zones. In: *New aspects on Viking-age urbanism c. AD 750–1100: proceedings of the international symposium at the Swedish History Museum, April 17–20th 2013*, L. Holmquist, S. Kalmring & C. Hedenstierna-Jonson (eds.). Theses and Papers in Archaeology B:12. Stockholm: Archaeological Research Laboratory, Stockholm University.

Lundström, P. 1968. Paviken I, ett vikingatida varv på Gotland. *Gotländskt arkiv* 40, pp. 99–114.

Lundström, P. 1971. Lagunhamnarnas tid. *Sjøfartshistorisk Årbok* 1970. Bergen: Stiftelsen Bergens Sjøfartsmuseum.

Munthe, H. 1948. Om gamla tilläggsplatser för farkoster på Gotland. *Gotländskt Arkiv* 19, pp. 44–56.

Olsson, I. 1985. SOS för äldre hamnar. *Fornvännen* 80, pp. 179–186.

Roslund, M. 2001. Gutar, främlingar och den förblindande vikingatiden: om staden Visbys tidigaste datering. In: *Från stad till land*, A. Andrén, L. Ersgård & J. Wienberg (eds.). Stockholm: Almqvist & Wiksell International, pp. 241–251.

Schück, A. 1924. "Sjöborgar" och "hamnstäder": ett bidrag till Nordens handels- och stadshistoria. *Fornvännen* 19, pp. 1–18.

Thunmark-Nylén, L. 1985. Gotlandsparadoxen. *Tor* XX, pp. 279–290.

Zachrisson, T. 2009. The mirage and the hillfort: Iron Age landscape and material culture on Stora Karlsö. *Journal of Nordic Archaeological Science* 16, pp. 39–47.

PER WIDERSTRÖM

The fourth road – new insights about Visby

Introduction

On the outskirts of Visby, on Gotland, large green areas that functioned as strolling areas are being developed with new residential buildings. And as the city grows, archaeological discoveries provide new insights into the history of the area. Many excavations, mostly small in scale, have been carried out in the last 50 years in the area. It is known from previous archaeological investigations that the area has been inhabited for a long time – certainly since the time of Christ. Recent discoveries, however, have proved this occupation to be more extensive than previously assumed. This throws new light on the conditions in the environs of Visby and even on the origins of the city itself.

The new streets leading to the residential buildings have been named after some of the island's most notable historic women; entrepreneur Wilhelmina Skogh, pharmacist Ada Block and archaeologist Greta Arwidsson, the latter of whom was not born on Gotland but played an active role in shedding light on the island's past. The fourth and last road in the neighbourhood is the only old road. Its called Stora Törnekvior. It is this road, which has long since linked the area with the inner city of Visby, that provides both the starting and end points for this article. The word "kvior", as in Stora Törnekvior, refers to the word for how a countryside road or cattle way is called on Gotland.

An old stumbling block revisited

The question concerning the origins of the city of Visby represents an old stumbling block for archaeologists. One major disagreement concerns the nature of Visby's immediate environs – did the city lie at the centre of an area of wasteland, or was there something else in the surroundings? Historian Hugo Yrwing described the perception of Visbys hinterland as it *[Visby] was surrounded during the Middle Ages by a barren and near deserted area which subsequently transcended into agricultural lands in the interior of the island.* (Yrwing 1986:11, translation by

the author). The idea that Visby was surrounded by almost-unusable wasteland is a longstanding argument, and one for which Yrwing found support in older research. In the early 1990s, however, this hypothesis was questioned by archaeologist Gun Westholm. Westholm looked back at the archaeological records made from Visby's outer area over the years and saw a different picture. Judging by the archaeology, the area had not been deserted at all in prehistoric times (Westholm 1989). In time, Westholm's ideas also received support from archaeologist Dan Carlsson. He painted a picture of a hinterland with completely different conditions than the old perception. The bottom line of his conclusion is that Visby's surrounding area in principle could accommodate 40 farms. However Carlsson does not claim that this ever was the case (Carlsson 2011:12f).

Stora Törnekvior – recent investigations bring new perspectives

Although discussions about Visby's surroundings have now calmed down, a number of excavations that have taken place since the late-90s have allowed new pieces to be added to the jigsaw-puzzle of Visby's history.

Today, the road called Stora Törnekvior runs from Allégatan to Visbyleden. It was once much longer and the old route can be traced in historical maps. A map from 1697 AD shows that the original road is now broken up into several individual sections. Today there are about 800 metres of the old stretch left. On the 1697 map, Stora Törnekvior is described as "*Road to Follingboe, called Tune qwia*".

Tun, tune and tuna

Tune qwia is thus the old name on the road. And Tuna and Tune, as place names, occur in very specific contexts. The word "tun" refers to an enclosure. The word is still frequently used on Gotland for a fence. As a place name, it is common in the Lake Mälaren area, where 100 of the 120 known Tuna names are found (ISF). The name, or rather the farms carrying the name, can be linked to a certain function or administrative role. The archaeology from these places traces the farm back to the pre-Roman era, and it is notable that they all share the common trait of yielding high-status finds.

On Gotland, Lilla and Stora Tuna in Viklau and Väte parishes and Tune in the Stenkyrka parish are such places. In Viklau and Väte there

are substantial stratigraphic layers with dark cultural soil. In Väte several artefacts have been found. Among the most eye-catching is a helmet of a rare type found in Scandinavia. Another one, similar in style to the one from Tuna in Väte, has been found in Grimeton in Halland (Nerman 1940:312). Grimeton is likely to be another one of the Tuna named farms, though here written *ton*. The artefacts from Väte date from the period 475–550 AD, and Tune in Stenkyrka parish is perhaps the farm behind the large grave-field at Bjers – one of the largest on the island.

The Institute for Language and Folklore in Uppsala states that the word tune referred to the 'farm in front of others' and with it become a term, used to describe a main house or central place. *Tuna has obviously been used as a specific term with the meaning of central territorial administration* … (ISF, translation by the author). As for the age of the term, it is assumed that it originated during the Early Iron Age and spread further in the Late Iron Age.

Even if one must be careful not to transfer ideas and models from elsewhere to an island with such special conditions as Gotland, one thing seems safe to conclude. The word tun-e/a refers to a farm that occupies a special position in the area where it's located. Following this derivation of place names, it is suggested that Tune qwia was the road leading from Visby via Tune farm. It was not a regular farm, but rather a farm with a certain administrative, legal or religious function.

Back to Stora Törnekvior

Tune qwia passes a couple of sites worth mentioning. In the western section of the road there was a grave field dating from the later part of the Iron Age. In 1868 and 1869 a number of graves from the Vendel and Viking periods were investigated. Ironically, the prehistoric graves were removed to make way for the extension of the modern cemetery. Further east along Stora Törnekvior some burials from the Viking Age have been investigated. Of the three graves found, two contained adult women and the third a very young child, estimated to be just six months old. Based on the artefacts with which they were buried, they appear to have lived and died during the 10th century. The trench that was dug when the graves were found was narrow. Its likely that there are more graves in the area around them.

Surprisingly extensive earth layers

Between the grave fields there used to be a settlement, or a farm. What's left of it are traces of post holes from buildings and the remnants of hearths. Also present are extensive black soil horizons, culture layers, which are rare on Gotland. The settlements often lay in what is now cultivated land and as such they have generally been destroyed by ploughing over the centuries. Dating analyses show that the areas had been populated at least since the Roman Iron Age. Remains of buildings dating from this period have been found during archaeological excavations. The construction of the houses was difficult to determine, but some things can be said.

House 1 was about 9 metres long. Five pairs of holes, with a spacing of approximately 3.5 metres, had contained posts that supported a roof. The distance between the seat pillars was between 1.7 and 3 metres. A sample from one of the post holes has provided a ^{14}C-date to the pre-Roman Iron Age (c. 360–50 BC).

House 2 was about 36 metres long. Due to the limit of the survey area, the width of the building could not be exposed. The distance between one of the post pairs measured 3.5 metres. The design was perceived as a three-aisled house. Samples from two posts were radiocarbon dated to the pre-Roman/Roman Iron Age (c. 110–200 AD).

House 3, like house 1, was about 9 metres long. The building contained five pairs of post holes. The distance between the lines was between 3.7 and 4.2 metres and the distance between the seat pillars ranged between 1.5 and 2.5 metres. Samples from two posts provided ^{14}C dates from the Roman Iron Age (c. 20–235 AD). The building was perceived as a single-aisled house (Wickman-Nydolf 2014).

The two 9-metre houses may have succeeded each other. In house 2, the blade of a single-edged sword – a kind that dates back to the Roman Iron Age, was found, and may date from as early as the 100's. Most of the ceramic shards from the site were found in these three houses.

Pottery, coins and wheat

About 50 metres from the buildings already described, there was once a building that was destroyed by fire. The building was used for storing cereals. It had an upstairs or loft. The grains found in the building were

Fig. 1. Wheat from Tuna, Visby. Photo: Jens Heimdahl, Arkeologerna, Swedish History Museum.

analysed to date the catastrophic event when the house burned down. The laboratory returned a date of between 18 and 193 AD. Another analysis was made of the construction residues, which provided a dating of between 50 BC and 80 AD. The two analyses reinforce each other in providing a date for this devastating event. The destruction of the building basically became a moment frozen by fire!

In the grain warehouse's ground floor layer, 95 % of the grain analysed comprised bread wheat, while that from the top floor layer consisted of 98 % hulled barley (Fig. 1). The figures reveal that there was a clear division between cereals. As the stock of bread wheat was carefully cleaned while the barley was unshelled and contained weeds, archaeobotanist Jens Heimdahl believes it was reserved for different uses. The well-cleaned wheat was for making bread and/or cooking,

while the unsorted grains of hulled barley were for brewing beer. This might be a very early example of baking bread on Gotland (Heimdahl 2016:39ff).

Artefacts

Adjacent to the house a deposit containing a pair of axes and a chisel was found. It is difficult to say whether they had been stored in the house or intentionally deposited under the building. If they were deposited as part of a sacrificial ritual, then it seems that this did not prove very successful.

Among other things, there were two pots of a type commonly called Öland pots or Gotland pots. These are of a special design inspired by Roman metal vessels. Given the extensive imports of Roman goods and ideas to both Gotland and Öland, it is not strange that these vessels occur on both islands. The ceramic type is linked to environments associated with high-status occupation. Analyses of the clay that the two vessels were made of also showed that one vessel was made on Öland, while the other was made on Gotland (Brorsson 2017). The method is not without problems. Similar clay can be found across large parts of Sweden, but the results of the analysis do support the idea that the pots were produced on Öland and Gotland respectively.

Speaking of Roman finds, it is interesting to note that some denars were found in the area. These had been struck for Emperor Hadrian and his successor, Antonius Pius. The coin of Hadrian was made sometime during the period 125–128 AD, or 132–134 AD, while that of Antoninus Pius was made in 150 or 151 AD. The year when the coins were struck is of course not the year when they ended up in the Gotlandic soil. Numismaticians generally assume that the coins actually came here a lot later, maybe 100 years after they were initially produced.

Among the finds is also another item with a Roman-inspired design. This was originally found on roman metal vessels, but in this context it seems to have been redesigned for use as a strap ending. It is a good example of how ideas and designs were not always copied, but instead used as inspiration for the development of new materials (Andersson 2007).

Local production – a basis for countryside life

About 30 metres from the burnt building a layer of "clean" and rock free soil was found. It was relatively free from pottery shards and interpreted as a possible cultivation layer. The analysis of the soil shows that the assumption could well be correct. "*The composition of the seeds in the cultivation soil is similar to that found in the house…*" (Heimdahl 2016:39). While we should remember that the cultivation horizons are often used for long periods of time and at different periods, the analysis shows that the grains found in the building were likely home grown. The ability to cultivate crops would have been an important prerequisite for life on the farm.

Migration and Vendel period

There are many objects in the area from the times following the fire – the Migration and Vendel periods. One of them is a pressbleche that should have been decoration for another object. It is an exclusive item that's likely to come from a helmet or some other high-status object. In the area where most of the Vendel period artefacts were found (e.g. a comb ^{14}C dated to 666–777 AD, beads, a key and a buckle), the remains of a building of uncertain date and type were found. There are numerous post holes that may relate to one or a couple of buildings.

The entire area that was occupied by the site was not big, perhaps about 80x50 metres or 4000 m^2. That said, it is of course likely that many of the later activities have destroyed some of the older traces of the settlements structure. An old pond, or water hole for animals, was filled with large rocks. This was probably done by the modern army when they used the area for practice. A paved corridor, covered with flat lime stone slabs, leading to the water hole suggests it was in use during the Roman Iron Age and Migration period. The sloping northern edge and the water line were covered with animal bones. The large numbers of bones might suggest that ceremonial practices took place, but I wouldn't exclude the possibility of a dump. The date for this event is 667–778 AD (Ua-54469). After that it was likely not used to water the animals. The paved corridor could of course also date to this later period of sacrifice, and may have acted as a form of ceremonial pathway.

Your hands can't pick up what your eyes can't see

Further east, surveys identified an area of extensive activity dating from the Vendel and Viking periods. It is not a settlement area, but rather something that might be described as an early industrial site. The area is located at a height (from a Gotlandic perspective). The initial survey showed that the ground was made up of a mighty layer of dark soil. The top 40 centimetres were very mixed and contained modern glass, nails and porcelain shards. Underneath this there was a cleaner soil that was black from charcoal and soot, as well as fire-damaged stones. However, the metal detector perceived something in the soil that the eye did not see. There were lots of metal fragments, small, almost microscopic, flakes of metal. The surface was packed with oxide scales, an oxide coating formed as a result of a reaction with oxygen when the iron is removed from the core. The coating is thrown away in the making of the metal piece. This is something characteristic of forging and this material was present in enormous amounts.

As an archaeologist, one can of course think it is a shame that out of the magic process of making iron, the cleaning of it and the forging of beautiful knives and swords, all that's left for us are the small oxide scales!

A building in the middle

In the middle of this dark soil area there is a circular shape, the remains of a round building. In the middle of it there is an oven. Soil analyses indicate that the structure might have been a house for cooking, something that was probably of great importance for the hard labour executed here.

Around that building, a number of hearths were found. All the hearths were very similar to each other; semi-circular, one and a half metres in diameter with fillings of cracked stones, dark soil and animal bones (Fig. 2). Bone can apparently be of use in metalworking when phosphorus is needed in the process. Among the artefacts found which can be linked to the metal working site, there was really nothing remarkable. Indeed, it may in fact be the lack of artefacts that makes the site remarkable given that it was in use for a couple of hundred years. The area must have been regularly and systematically cleaned. A number of knives were found. They don't seem to be broken, but the

Fig. 2. The metal work area from above. Photo: © Segerberg Media AB.

fact that they seem to have been well-used might imply that they are lost personal belongings.

The two ground layers mentioned earlier seem to be close to each other in time. Perhaps the activity moved around and returned to the same location just a few years later. Several dating analyses have been made and they all show similar results; the site was used for metal handling from around the mid 7th century, and this activity continued into the 900's.

Tar

Nearby was also a tar kiln, a simple version with a hole and a bucket to collect the dripping tar. The outer dimension was just over 2.5 metres in diameter. The dark surface sloped inwards from the outer edge towards the center of the plant where it became considerably deeper, like a funnel. At the center of the facility there was a pit and it was also black with soot and coal (Fig. 3). The central cavity was about 0.45 metres deep and had fairly even edges. At the bottom of that pit there was a flat limestone, which was probably used to place a bucket on – the first known of its kind on Gotland.

Vendel bones and Viking well

Judging from the artefacts and the smaller number of building remains, the settlement moved eastwards during the second half of the Iron Age. About 50 metres further east along Törnekvior there were the traces of the Viking era. A scale from the 9th century was found still folded into pocket mode. Among the approximately 30 coins found during the survey, most date from the 9th, 10th and 11th centuries. The most recent dates the last phase of the settlement to the 1080s, or there about. At some point, the army needed a road that passed from Stora Törnekvior and through the settlement area. Unfortunately, they dug it straight through the Viking part of the settlement. That is a shame, as traces of Viking Age buildings are hard to find on Gotland.

During the Viking Age a well was built, or an existing well was re-built (Fig. 4). A wooden structure in the bottom of the 3.5 metre deep and stone sided well could be dated to the 900's, or more specifically

Fig. 3. Tar pit (opposite side). Photo: Per Widerström, © Gotland Museum.
Fig. 4. The well (above). Photo: Per Widerström, © Gotland Museum.

Fig. 5. Coin for Harald Hen, Fnr 719.
Photo: Per Widerström, © Gotland Museum.

894–1014 according to the radiocarbon analyses. The well was elegantly constructed of limestone except in the bottom where the last and deepest metre was lined with granite. It appears as if the well was filled with rocks when the site was abandoned. At the bottom, beneath the rocks, lay some animal bones. The possibility that the well was poisoned cannot be ruled out. Perhaps whoever abandoned the settlement did not want others to use it. It is also possible, however, that this was a sacrificial act.

As noted above, the youngest dated artefact from the farm is a coin (Fig. 5). It was struck for the Danish king Harald Hen. Harald was born in 1041 but his time as regent was from 1074 or 1076 to 1080 AD, when he died. The coin is in good condition and should have ended up in the soil here before the year 1100, so it provides a good date for the last stage of the settlement.

Unfortunately, the Viking period houses are still missing but the well and the objects from that time provide important evidence of the people who lived here during the Viking period. The tombs a few hundred metres away along with the Stora Törnekvior are also proof for the existence of Viking life in the area.

Conclusions

It seems that the farm was inhabited and used from around the birth of Christ and until about 1100 AD. This suggestion is supported by the nature of the artefacts found, as well as the results of the ^{14}C analyses. The survey identified a settlement from Roman Iron Age. The artefacts indicate that the farm was prosperous and long-lived! A sword, axes, high-status pottery, belt details, fittings, coins, antler, keys and weights and scales provide us a with picture of a place that was continuously in use. The objects recovered indicate that people lived and worked here until the end of the Viking Age. For a period of nearly 1000 years, they moved to the east along Törne- or Tunekvior; a distance of just a few hundred metres.

In most cases the cultural layers are thin on Gotland, but this farm has left us with unusually thick cultural layers. With the help of skilful analysis we can see what was grown and also understand what it represents. Traces of the structures that made up the farm houses, fireplaces, postholes for buildings and a magnificent well all stand out.

This shows a farm, a settlement, in use for at least 1100 years. In spite of that there are no large numbers of artefacts, but all that's been found are of high quality. In principle, all items are of high-status. What was stored in the cereal magazine, the industrial estate, the pressbleche, and the new tar making kiln all strengthen the image of a very rare environment.

A previously discovered hoard of gold and silver (SHM 4126), found in 1869, can also be added to this image. The definite find spot is not known, but it should come from an area right next to the farm discussed here. The hoard consisted of five kilos of mainly silver, but also gold, with jewellery, bits of silver and just over 1600 coins. The hoard dates to the 11th century, with a tpq of 1042 AD (Östergren 2003). Silver hoards are of course common on Gotland, but those which include gold are very rare. It is also an indication of an exclusive settlement at the Tuna farm's closest neighbours during the Viking era.

Life and death

Where they buried the dead is not known. Given the age of the early farm, it is possible that they were buried at Annelund, the large grave field located just by Visby Airport. The grave field is excavated and

many graves have provided datings similar to that of the farm at Tune kvior. Many of the graves are unusual in their morphology; examples of wheel-spoke graves and boat-shaped limestone coffins, for example, are known (Elmshorn 1998).

In later periods, it is possible that the inhabitants of the farm buried their dead at the grave field east of Visby, near Länna, which was subsequently removed to make way for the expansion of the Eastern Cemetery in Visby. And of course they could also have been buried at Kopparsvik – the extraordinary grave field in southern Visby. The grave field is famous for its magnificent objects and for the patterns engraved in the teeth of several of the dead. The grave field is not associated with any known farm and it also has a very special character of both fine and simple graves; a pattern that has not yet been convincingly explained. With this in mind, it seems even more reasonable that the old road named Tune qwior got its name because it led to the farm Tune. And not only that, it also led to a productive area that was linked to the farm. This was an unusual place.

The birth of a town

The last generations who lived on the farm described here saw Visby evolving from a small fishing village to a significant urban society, with links that expanded far beyond the coast of Gotland. They may have even played a leading role in Visby's emergence as a city. Perhaps they had something to do with the sacred "Wi" that appears in the first letters in the city name (Blomkvist 2017:268). Unfortunately, only some of their artefacts remain, and these can speak only to a part of their history. What they saw, we do not know. Nor do we know what they thought about the novelty of the city that was growing up nearby. Maybe the prospect of living in an urban environment was the reason why they left the farm and moved away from there.

Like modern business guru Tom Peters said, "if a window of opportunity appears, don't pull down the shade". Perhaps the people living at Tune saw an opportunity, packed up their belongings, and walked the primrose path to town.

References

Andersson, K. 2007. Designstöld – för 2 000 år sedan Månadens föremål Augusti 2007. http://historiska.se/upptack-historien/artikel/-designstold-for-2-000-ar-sedan/ [Accessed 14 November 2019].

Blomkvist, N. 2017. Visby före 1288 – tätort, fältslag eller vad? In: *Arkeologi på Gotland 2: Tillbakablickar och nya forskningsrön*, P. Wallin & H. Martinsson Wallin (eds.). Uppsala: Uppsala universitet, Institutionen för arkeologi och antik historia, pp. 265–274.

Brorsson, T. 2017. Keramikanalys. In: *Rapport: Arkeologisk undersökning på fastigheten Artilleriet 1:33, Kv. Sergeanten 3 & 4, Visby Gotlands län.* Länsstyrelsens dnr:431-130-16, J. Norderäng, P. Widerström & M. Kristiansson (eds.). Visby: Gotlands Museum, pp. 27–37.

Carlsson, D. 2011. "Trakten kring Visby är en öde bygd": om det äldre jordbrukslandskapet i Visby. In: *Visby landet utanför muren,* A. M. Pettersson, M. Herlin Karnell & L. Sjösvärd (eds.). *Gotländskt Arkiv* 83, pp. 7–20.

Dalsbro, Å. 2017. Ölandskrukor. Romersk vardag – lyx på Gotland? Kandidatuppsats 15 hp i arkeologi, VT 2017. Student essay. Uppsala: Uppsala University, Campus Gotland.

Elmshorn, M. 1998. Rapportsammanställning Visby Annelund, stg 421 m.fl. Dnr 421-4129-1998. Unpublished report. Visby: Gotlands Museum.

Heimdahl, J. 2016. Makroskopisk analys av jordprover från Visby, gamla A7-området, Teknisk rapport, Arkeologerna SHMM. Bilaga. In: *Rapport: Arkeologisk undersökning på fastigheten Artilleriet 1:33, Kv. Sergeanten 3 & 4, Visby Gotlands län.* Länsstyrelsens *dnr:431-130-16,* J. Norderäng, P. Widerström & Kristiansson, M. (eds.). Visby: Gotlands Museum, pp. 38–43.

ISF. *Vad betyder tuna?* Institutet för språk och folkminnen. http://www.sprakochfolkminnen.se/sprak/namn/fragor-och-svar-om-namn/namnfragor/2015-08-18-vad-betyder--tuna--.html [Accessed 2018-11-14]

Nerman, B. 1940. Ännu en konisk prakthjälm ifrån ett svenskt fynd. *Fornvännen* 1940, pp. 312–315.

Norderäng, J., Widerström, P. & Kristiansson, M. 2017. *Rapport: Arkeologisk undersökning på fastigheten Artilleriet 1:33, Kv. Sergeanten 3 & 4, Visby Gotlands län Länsstyrelsens dnr:431-130-16.* Visby: Gotlands Museum.

Olsson, I. 1984. *Ortnamn på Gotland.* Stockholm: AWE/Geber.

Vikstrand, P. 2010. Ortnamn och den äldre järnålderns högstatusmiljöer. In: *Makt, kult och plats: högstatusmiljöer under äldre järnåldern: kultplatser: två seminarier arrangerade av Stockholms läns museum under 2009 och 2010,* P. Bratt & R. Grönwall (eds.). Stockholm: Stockholms läns museum, pp. 58–66.

Westholm, G. 1989. *Visby – bönders hamn och handelsplats: Visbysamhällets uppkomst och utbredning under förhistorisk tid och äldsta medeltid*. In: *Visby – staden och omlandet II.* Medeltidsstaden 72. Stockholm: Riksantikvarieämbetet och Statens historiska museer.

Wickman-Nydolf, G. 2014. Boplatslämningar på fastigheten Artilleriet. RAÄ 206 och 207, Kv. Adjutanten och Artilleriet 1:33 Länsstyrelsen dnr 431-1202-12. Unpublished report. Visby: Gotlands Museum.

Yrwing, H. 1986. *Visby – hansestad på Gotland*. Stockholm: Gidlund.
Yrwing, H. 1994. Gun Westholm och Visbysamhällets uppkomst: svar på ett genmäle. *Fornvännen* 1994:3, pp. 165–167.
Zerpe, L. 1999. Förhistoriska boplatslämningar. Kvarteret Mullvaden, Visby socken 1997–1998. Länsstyrelsen dnr 220-3280-97. Unpublished report. Visby: Gotlands Museum.
Zerpe, L. & Widerström, P. 2016. Arkeologisk undersökning av påträffade lämningar inom fastigheten Visby Artilleriet 1:33, Sergeanten, Region Gotland. Länsstyrelsens diarienummer 431-2485-15. Unpublished report. Visby: Gotlands Museum.
Östergren, M. 2003. Artilleriet (A7 området) i Visby – ett område med flera vikingatida bosättningar. Unpublished report. Visby: Länsstyrelsen.

CARBON DATINGS

Ua-54463. Analysrapport, Ångströmlaboratoriet, attached to Norderäng, J., Widerström, P. & Kristiansson, M. 2017.
Ua-54464. Analysrapport, Ångströmlaboratoriet, attached to Norderäng, J., Widerström, P. & Kristiansson, M. 2017.
Ua-54465. Analysrapport, Ångströmlaboratoriet, attachwed to Norderäng, J., Widerström, P. & Kristiansson, M. 2017.
Ua-54467. Analysrapport, Ångströmlaboratoriet, attached to Norderäng, J., Widerström, P. & Kristiansson, M. 2017.
Ua-54469. Analysrapport, Ångströmlaboratoriet, attached to Norderäng, J., Widerström, P. & Kristiansson, M. 2017.
Ua-57405. Analysrapport, Ångströmlaboratoriet. Forthcoming.
Ua-57333. Analysrapport, Ångströmlaboratoriet, attached to Zerpe, L. & Widerström, P. 2016.

TORUN ZACHRISSON

Öland during the Late Iron Age and Early Middle Ages (550–1200 AD): a donkey between two strips of hay

Introduction

The Early Iron Age history of Öland is characterised by numerous signs of wealth and prosperity. Roman imports of several types – some of them unique objects – such as deities in bronze and Roman military banners, as well as evidence for the importation of fortification construction techniques (as seen for example in the grating gate from Eketorp fort), bear witness to intimate contacts with the Roman world (Näsman 1984; Lund Hansen 1987; Herschend 1980; e.g. Bohlin & Hagberg 1975). Agrarian expansion into marginal land attests to prosperity, as illustrated by the small, dependent farms on the Alvaret in the southern part of the island (e.g. Fallgren 2006:27–29). The Roman solidi brought home by mercenaries perhaps represent not just sources of income but also inter-group rivalry. Some of these were gold coins of rare issues, fresh from the mint, probably once kept in the treasuries of the disintegrating Western Roman Empire (Fischer 2019:12; Fischer & López-Sanchez 2016). The gold coins were looted, gathered by members of war bands or earned as salaries by body guards serving various lords in Pannonia and then Italy during the empire's decline in around 476 AD (Wickham 2009:85–91; Fischer 2005:149–153, 2017: 319, 322; Hedeager 2001). This coincides with the period when Öland experienced societal change. The massacre at Sandby borg in the late 5th century is a sign of the conflicts taking place at this time. While this event is presumably representative of power struggles within local Ölandic groups (Alfsdotter et al. 2018; Alfsdotter & Kjellström 2019; Papmehl–Dufay in this volume), it could also have been linked to shifting alliances during the breakdown of the Western Roman Empire.

In the late 5th century the stream of gold that had flowed into Ölandic society stopped, and instead took other directions: to Gotland and Helgö in the coastal area of central Sweden. The types of solidi

found indicate that retinues from Helgö collaborated with those from Gotland and Bornholm (Fischer 2005:151–153, 2017:322). Apparently, this late flow of solidi "avoided" Öland, which may have been in political limbo. Once an affluent and apparently rather autonomous society, the situation changed during the Late Iron Age (550–1050 AD). Öland lay on the borderland between two large entities, the realm of the Svear and that of the Danes. These Scandinavian realms have been described by place-name scholar Thorsten Andersson as "particularly expansionist, not to say imperialist" (Andersson 2006:1). This is the background for the metaphor used in the title of this article: a donkey between two strips of hay. Ölandic society was not in a position to choose, but was subordinate to either the realm of the Svear or that of the Danes. Thus, the research question of this article is: can archaeology and its associated disciplines shed light on the geopolitical setting of Öland during the Late Iron Age and Early Middle Ages?

A borderland between larger realms

Geopolitics refers to political power connected to geographic space, especially territorial aspects such as coastal waters and land, and diplomatic relations between realms and sub-divisions of such units (Devetak et al. 2012:492; Cohen 2003). During the Iron Age, male fashions including weapons reflected inter-regional trends, while female costume, i.e. jewellery and clothes, displayed local/regional identities. Karen Høilund Nielsen (1991:130–133) and Ingunn Marit Røstad (2016) have convincingly argued that female costume displayed regional identities/ethnic groups ultimately corresponding to political territories; a position with which I agree. In the Migration period female costume provides a good illustration of the many different local identities linked to the various petty kingdoms/chiefdoms that existed in Scandinavia (Røstad 2016). In the period 550–700 AD, many of these smaller kingdoms/chiefdoms came together to form larger realms. This is also illustrated by the fact that the costume worn by women in Scandinavia now formed regions corresponding approximately to the present Nordic countries; Öland belonged in the eastern part, i.e. Sweden (Røstad 2016:309–313). When the period is divided into finer chronological sequences covering more brooch types, however, the shifting borderland between these larger realms can be detected (Høilund Nielsen 1991).

In the late 6th century the Ölandic female dress code, as well as that of Småland and Blekinge, resembled that of eastern Middle Sweden (Høilund Nielsen 1991:132; cf. Røstad 2016:295; Åberg 1923:142–155). However, in the 7th century a South-Scandinavian extension took place and women in Småland, Öland and Blekinge instead wore a dress that shared affinities with dress code of Southern Scandinavia: beak shaped brooches, bird brooches (viewed from above) and rectangular and oval brooches decorated in animal style. In the early 8th century this pattern was maintained but there were tendencies of expansion from the Mälar region towards the south or south-east (Høilund Nielsen 1991:133, 153). Interestingly, after AD 750 it is no longer possible to reconstruct any territorial divisions based on female jewellery as all types are present everywhere, except for the islands of Gotland and Bornholm, which withhold their specific type of jewellery (Høilund Nielsen 1991:132–133).

The changes that occurred in the Vendel-period female costume of Öland can be read as a sign of a shift in geopolitical power, from a period of belonging to or being dominated by eastern central Sweden in the late 6th century, to a longer period – the whole 7th century – of belonging to or being dominated by the South Scandinavian realm. In the early 8th century, the latter alliances were upheld. Nevertheless, an expansion from the Mälar region towards the south-east was also noticable (Høilund Nielsen 1991:133, 153). This is the background against which a boat burial *'the cairn on the nes'*, on northern Öland can be viewed.

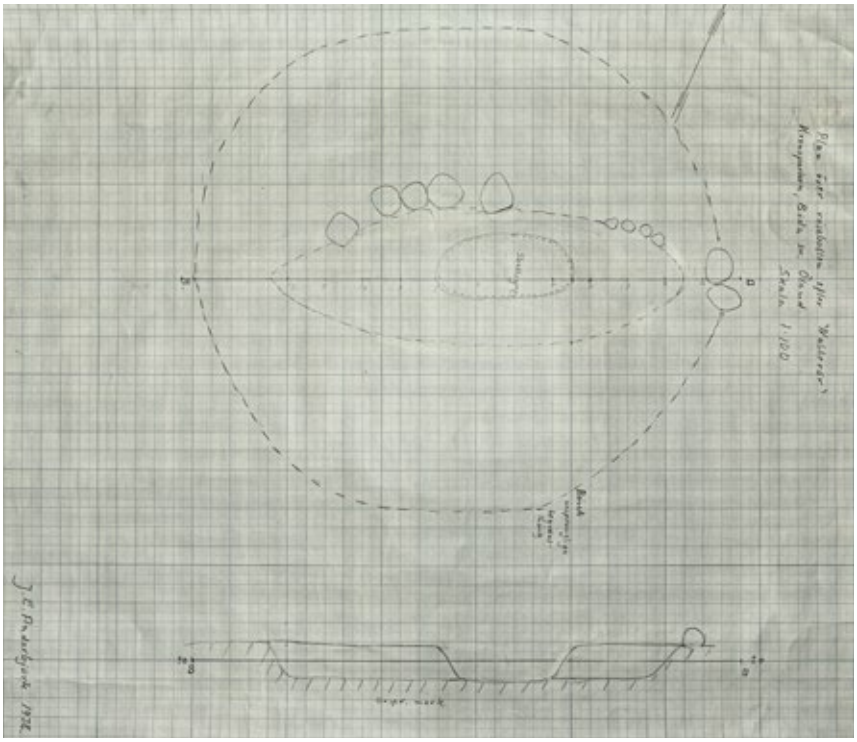
The boat burial Nabberör

At the northern-most tip of Öland there is an excellent lagoon harbour *Grankullavik*. It is one of the best natural harbours in this part of the Baltic, formed like a lobster's claw, possible to enter through a small passage. In the Middle Ages it was called Örehamn (*ørehaffn*). At the inlet, there was a chapel consecrated to Saint Olof. In the 14th and 15thcenturies, the Swedish kings Albrekt of Mecklenburg and Kristoffer of Bavaria signed charters here, and in 1487 king Hans came with '40 sails' to meet Sten Sture at the harbour (Axelsson et al. 1996:42, 47). It apparently had the capacity to function as a naval base in the Middle Ages (cf. Fallgren 2006:136).

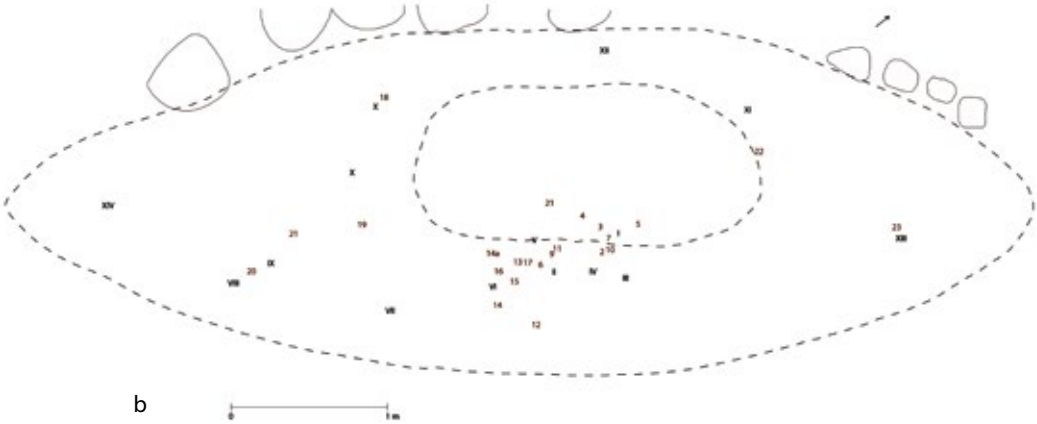
Place name scholar Lars Hellberg has pointed at a certain element in the Late Iron Age maritime landscape, namely the lagoon harbours (Hellberg manuscript). They were so important that they got a special term attached to them – *nor*. It originally was used for a "narrow watercourse that joins two open water bodies" (cf. SOL 2003, Nor), but gained a special meaning in central Sweden where it came to denote "a bay cut off from lake or sea" with narrow inlet and thus refer to lagoons, which served as harbours (Hellberg manuscript). Among the "nor" is for example the boat burial site Norsa in Västmanland *Nor-Husa*, where at 6 metres above sea level a kidney-shaped lagoon was formed (Nylén 1994:141). The first compound denotes the lagoon harbour, while the second compound *-husa* possibly refers to boat houses connected with the prehistoric levy (cf. Vikstrand 2008:198f) or strategic sites along the water routes of importance for levy and trade (Brink 2002:57; see also Hellberg 1979:150–152). By using shore-line displacement Hellberg argues that this phenomenon started in the 8th century (Hellberg manuscript, 2011).

Örehamn/Grankullavik is a prime example of a *nor*. Close to the south-eastern shore of the lagoon bay at Nabberör, a boat burial dated to the early 8th century was found at 4 metres above sea level (Fallgren 2001:33). Unfortunately, the cairn that covered the burial c. 15 metres in diameter and 2 metres high, had been severely damaged before 26th–30th of September 1938 when it was excavated by J. E. Anderbjörk and his assistant C. O. Rosell (ATA, Böda parish). Five years earlier the stones of the cairn had been removed and used for a nearby harbour pier. Afterwards the burial remains lay exposed not only to weather, but also to looters who dug a hole measuring 3.5x2 metres and 1 metre deep in the middle of the cairn bottom (Fig. 1a). A layer of logs that had once covered the boat could nevertheless be identified during the excavation (Anderbjörk 1939:71). The boat was approximately 11 metres long and 3.5 metres wide (ENE-WSW, although Anderbjörk states NW-SE in the text) and c. 200 rivets remained. The excavation was summarised by Anderbjörk in the ancient monument register of Böda parish and presented in a shorter article (Anderbjörk 1939), but it has never been thoroughly analysed.

It was clear from the beginning that this represented an inhumation burial of several humans and animals, resembling the famous boat



a



b

Fig. 1a. Nabberör, grave plan, over-view. ATA, archives.
Fig. 1b. Illustration: Krister Wedholm, © County Museum of Uppland.

burials of eastern middle Sweden (Anderbjörk 1939). The human skeletal remains were poorly preserved but around 50 teeth remained which were supposed to represent at least c. 3–4 interred human individuals. Two of the humans were placed with their feet in towards the middle of the boat and one in the north-east with its feet towards the boat. A spindle whorl made of soap stone found in the stem of the boat indicate that there possibly was a woman among the interred. At least one shield boss and a sword hilt were found lying in the middle of the boat (Anderbjörk report). The animal bones contrasted with the human bones by being relatively well preserved. There were two dogs in the middle of the boat, one dog close to the stem and one in the aft, plus the remains of a bridled horse and a pig in the aft. Sheep/goat were also present (analysis by Dahr in the 1930s).

The fact that the mountings of a shield boss display cuts (Fallgren 2001:34, 49, 54) as well as the number of buried individuals have led to the conclusion that those buried in Nabberör could have been involved in a martial conflict. The excavator Anderbjörk compared the finds to the rich boat burials in Uppland, and suggested that it could at first glance appear to be a magnate from the Fyris river valley killed in a conflict by the bay. The boat burial and the shield mountings spoke in favour of a connection with the Mälar region, while the sword grip showed connections with Bornholm. But this burial was different from both the local tradition and the boat burials of the Fyris valley, as it contained several individuals, was placed in a cairn, and typical objects such as kitchen utensils were missing. While burial in a cairn spoke in favour of the individuals being locals from Öland, on the other hand the objects, the boat burial rite and the isolated position of the grave by the bay indicated that the deceased were outsiders (Anderbjörk 1939:66, 72).

When the animal style decorated objects from Nabberör were identified by Karen Høilund Nielsen as mountings for a shield, a sheath for a weapon knife/seax and a sword hilt were analysed and compared against materials from southern and eastern Scandinavia. It was apparent that the deceased individuals very probably originated from the Mälar region (Høilund Nielsen 1991:133, 144). This hypothesis has recently found support in an osteological study of the Iron Age population of Öland by Helene Wilhelmsson, which found that the isotopic data from teeth recovered from Nabberör indicate that a young human

Fig. 2a. Gilded shield boss in Vendel period animal style with cuts. Photo: Gabriel Hildebrand, Swedish History Museum.
Fig. 2b. The shield boss mounting displays the cuts, probably made by a sword. Photo: Swedish History Museum.

(VIII) and a dog were not local to Öland, but raised in central Sweden. A second young human individual (IV) could have been raised away from the island, but this is uncertain (Wilhelmsson 2017, ID 1055, 1077; Wilhelmsson & Price 2017:194)[1].

When a boat burial case-study was launched by the archaeo-genetic Atlas-project, it was important to include the individuals also from Nabberör. In the Swedish History Museum inventory catalogue the objects (1–23) and human and animal remains had been numbered (I–XIV). The complicated, disturbed context made it difficult to understand from which parts of the boat the bones emanated and to fully grasp the context as an excavation plan had never been published. Did the excavation plan still exist or was it missing? Luckily, the drawings were re-discovered in the ATA archives which greatly improved our understanding of the context. In the north-eastern part there were human and animal remains (XIII) and nails (23). Close to human bones (XI) on the western side of the boat was a spindle whorl (22). In the middle of the boat on the eastern side was a concentration of objects and human and animal remains (I–VI), among them mountings for a shield boss (for ex. 12, 14, 17). Two of the individuals (XI, XIV) were sampled for aDNA-analysis. Only one of them (XIV, an individual whose remains were not identified as human in the grave plan) from the southern end of the boat yielded enough DNA to be included in the analysis. The individual is a male. Unfortunately, the results from the other individual (XI) were too poor to be included in the analysis. This individual will be compared with individuals from other boat burial contexts (Zachrisson et al. forthcoming).

The Salme example – signs of a tributary land?

Since the discovery of the boat burials from Salme on the island of Saaremaa (Ösel), Estonia, the framework for interpreting the Nabberör boat burial has improved greatly. The setting for the Salme boat burials is likewise located in an extremely strategic point in the maritime landscape – in this case by a strait. There two boats 11 and 17 metres long respectively containing forty-one interred individuals dating to c. 750 AD were excavated. The weapons and outfits of the deceased resemble the famous Vendel, Valsgärde and Ultuna boat

1. Wilhelmsson and colleagues at the department of archaeology and ancient history at Lund University have recently started a project on the Nabberör context.

burials in Uppland, Sweden, although it is worth noting that the Salme vessels contained many more individuals – as many as 34 and 7 respectively, all according to the osteological assessment males like at the three Upplandic boat burial sites (Konsa et al. 2009; Peets et al. 2011). Underpinning the relationship to central Sweden is the fact that the males seem to have been born and raised in the lake Mälaren region, as indicated by the levels of strontium in their teeth (Price et al. 2016:1030–1032). Thus the context of the burials is comparable to Nabberör: they are situated at an extremely strategic point in the maritime landscape, they contain several individuals, and those within the burials bear evidence of violence. The isotopic levels similarly indicate that the individuals were raised in the Mälar Valley. The social setting of Salme has been interpreted as a diplomatic mission from the Svear that went wrong (Price et al. 2016:1030–1032). Another scholar however, is of the opinion that the deceased had not been buried on a single occasion. Due to the variation in the ^{14}C-datings of the interred these are instead interpreted as recurrent burials of Scandinavians in the service of a local chieftain at a harbour on Ösel (Mägi 2019:50). It has also been noted, however, that the circumstances of the burial are similar to that in *Ynglingatal* ch. 25 where it is described that Yngvarr, one of the Ynglinga-kings, died in a battle by the sea while in Eysyssla (*Ynglingatal* [1925]). *Eysyssla* is the Nordic place name for Ösel, Saaremaa. *Ey-* denotes island and *-syssla* an administrative district (Blomqvist 2000:16). Snorri Sturluson, in his *Ynglinga saga* written c. 1230 likewise states that the Svea king Yngvarr died while raiding in Estonia and that he was buried in a mound by the sea in Adalsyssla, i.e. inner coastal Estonia (Snorri Sturluson [1964; 1991]:ch. 32; see also Mägi 2019:21; cf. Price et al. 2016:1030–1032). Historians consider the source value of *Ynglingatal*, which is dated to c. 900 AD, to be greater than that of *Ynglinga saga* (see Sundqvist 2016:68–70). By the genealogy of the rulers and the dating of *Ynglingatal* itself it is evident that the events described took place probably in the Vendel period. Perhaps the martial event mentioned had nothing to do with the Salme context. Nevertheless, it was obviously a historical setting that fit the old world of the Uppsala kings, and it is worth bearing in mind that both the results of isotopic analysis and the weapons indicate that the deceased originated from the Mälar valley. Furthermore, aDNA-analyses have

been performed by Eske Willerslev's laboratory, which together with further analysis on the archaeology of the burials by Jüri Peets and colleagues will further expand on the matter.

The Salme straits are situated on the sea route from the Svithiod to Kurland. In the 9th century, Rimbert in *Vita Anskarii* mentions a people called "Cori, who lived far away from the Svear, and who had previously been brought under their dominance" (Rimbert, *Vita Askarii*, ch. 30). The Danes had tried to subjugate parts of Couronia that had erlier belonged to the Svear in the 840s, but they were defeated (Mägi 2019:33; Rimbert ch. 30). Rimbert in c. 870 describes how king Olef of the Svear renewed the overlordship with the Cori. The latter agreed to hand over all the gold and weapons that they had taken from the Danes a year before, give half a pound of silver for each man, give the tribute they had used to give before, send hostages and be as loyal and obedient as they had used to (Blomkvist 2008:176; see Rimbert, ch. 30). This can be viewed as a tributary treaty. Other tributary lands like Gotland probably functioned in similar ways (Blomkvist 2008:176). Rimbert's statement about an earlier tributary bond could but need not allude to events in the 8th century, among them an event that caused the deaths of the young men at Salme.

When Wulfstan described his Baltic voyage from Hedeby to Truso during the late 9th century, he stated that:"Blekinge and Möre and Öland and Gotland, these are subjects to the Svear: "*Blecingaeg, Meore, Eowland, Gotland on bæcbord, þas land hyrað to Sweon*" (Bateley & Englert 2007:48). The account is recorded in Orosius' *Histories* in the translation ordered by king Alfred of Wessex in the late 9th century (Englert & Trakadas 2009). Historian Nils Blomkvist (2005:205) has suggested that "all regional groups of people – 'belonging' to the Svear outside the Mälar Valley, were actually some sort of skattland" when referring to Wulstan's statements.

Wulfstan's account of the political setting of Öland and neighbouring regions has been interpreted by Stefan Brink as indicating that Öland belonged to the sphere of influence of the Svear, or that it was perhaps even subject to the Svear, and that culturally and in respect of trade the island was influenced by the Svear (Brink 2007:69). This is supported by the group of dialects spoken in the Lake Mälar region, the Svea-dialects *"sveamål"*, which extend southwards along the coast and include Tjust, Möre and Öland (Andersson 2006; Fries 1962;

Fig. 3. Salme in Ösel and Nabberör on the northern tip of Öland, two extremely strategic harbour sites in the Baltic.
Map: Laila Kitzler Åhfeldt, Swedish National Heritage Board.

Fig. 4. The maritime network realms at the time of Wulfstan's accounts. Salme to the north of the coast of Kurland and Örehamn on northernmost Öland are in the borderland between realms. After Blomkvist 2008:173.

Hesselman 1905). The exact chronology for this is largely unknown, but several place-names indicate that the spread of dialects took place during the Late Iron Age (Brink 2007:70). Throughout the whole Middle Ages, Kalmarsund and the southern tip of Öland marked the southernmost part of Sweden (e.g. Blomkvist 2005:302).

Wulfstan stated that Gotland also belonged to the Svear. The dialect of Gotland together with Gotlandic place-names show influences from eastern central Sweden (Brink 2007; Hellberg 1988). A dependence between the two is mentioned in the *Guta saga*, the saga of the Gotlanders, written c. 1220. In the text it is said that the Gotlanders agreed to pay a yearly tribute to the Svea king during the Late Iron Age (Peel 1999, liii). In return, the Gotlanders should enjoy peace/be protected in all the lands across the sea belonging to the Uppsala kings *Þair sendibuþar aigu friþ lysa gutum alla steþi til sykia yfir haf, sum Upsala kunungi til hoyrir* (*Guta saga* [1999]:6, Peel in *Guta saga* [1999]:xxxiv). The time frame that the *Guta saga* encompasses has been discussed but today most scholars agree that the annual tribute from the Gotlanders to the Svear and Gotland's position as a tributary land has its roots in the 9th century (see Blomkvist 2005:205; Peel 1999 in *Guta saga* [1999]; Lindkvist 1983). A rune stone dating to c. 1050 AD from Torsätra in Uppland, placed by the main water route leading into Svithiod could also allude to this tribute. It states that Husbjörn got sick abroad when they took payment/tribute on Gotland (**kialt · toku · a kutlanti ·**, *giald toku a Gutlandi*) (U 614; cf. Lindkvist 1988:44).

Trade routes in the Baltic protected by and claimed by realms

The contexts for the boat burials of Nabberör and Salme can be taken as indicating that, during the late 7th and early 8th centuries, control of strategic points in the maritime landscape of the Baltic had become increasingly important. This was probably underpinned by innovations in sailing technology as has been pointed out for the Salme boats but also with the emergence of the eastern routes (Edberg 2017:17–21; Hedenstierna-Jonson 2009:158; Hedenstierna-Jonson in this volume). We do not know what power defeated the men buried in Nabberör and Salme, but it could have been Danes (see the discussion on Rimbert's descriptions above, for further discussion on network realms, see Blomkvist 2005: ch. 4, 2008:172–176). From Høilund Nielsen's study it appears that the polit-

ical powers trying to dominate the eastern Baltic waterscapes shifted between the realms of the Danes set in Denmark/Scania and that of the Svear in the Mälar region. It is also possible that the men from Salme and Nabberör could have come in martial conflict with the chiefdoms of the eastern Baltic. There are no burials from the 8th and 9th centuries on the island or from the Estonian coast, apart from a local burial site by the harbour at Lepna (Mägi 2019:50). Saaremaa (Ösel) is otherwise renowned for its prehistoric iron production: many bloomery sites and smithies placed by the settlements (Creutz 2003; Peets 2003:135).

Place-name scholars have pointed at a small group of place names in the Baltic containing the name of the people *svear*. They are few but occur for islands and important strategic maritime features. A famous example is *Svibo* on southernmost Öland, others are *Sviby* in Jomala on Åland, perhaps also *Sviby* on Ormsö in Estonia and *Svesing Svea-Husum* in Southern Schleswig (Hellberg 1979:152; Andersson 2006:12–13). Svibo, recently discussed by Per Vikstrand, can be characterised as a name given by those who used the water routes; people from Scania, Denmark or Blekinge approaching the site, who recognised it as a harbour belonging to the Svear (Vikstrand 2019:167) or "the warehouse of the svear" (Blomkvist 2005:361). During the late 12th century this place was in the possession of Birger Brosa, the jarl of the Svear, guarding the southernmost tip of the realm (for the jarls of the Svear, see Fritz 1971).

The levy/*ledung* and the tributary lands were vital components upon which the multi-regional Viking Age network realms relied to keep the important trade routes open on which they depended (Blomkvist 2005:214). Early written sources such as Rimbert's *Vita Anskarii* and the archaeological and isotopic results from Salme and Nabberör tell us that these processes had already started in the Vendel period. The trade routes were dependent on the protection of nodal sites that the kings could support and guard, such as is alluded to in the *Guta saga* for the Uppsala kings and their claim over certain parts of the Baltic. Lagoon harbours were important as protected sites, which tradesmen could visit safely and where for instance iron that was produced within the Svear realm could be sold or bartered. There was a clear peak in the iron production in central Sweden, which started in the 8th century and continued into the 11th century, as is illustrated by sites recorded by the National Heritage Board (Magnusson 2015:111).

In this context it is interesting that a "protected, marked area" seems to have been laid out in the 7th century in the form of a c. 1 kilometre long, 1,5 metres wide dry-stone wall with an even front facing the sea at Köping. It is made up of large boulders in an area that only was a sandy beach in the zone 5 metres above sea level, thereby bordering the Iron-Age coastline. Furthermore, the cultural layers dating to the Viking Age and early Medieval period do not respect but instead cover it, meaning that the feature is older than the Viking Age. The wall has cautiously been interpreted as an initial demarcation of the trading place during the 7th century, and it was seemingly constructed by groups of people using slightly different stone materials (Schulze 2004:58–61). The site is situated at Köping on the north-western part of Öland by the coast and known from the Viking Age and Early Medieval period as an assembly site, characterised by its large necropolis and over-dimensioned church (cf. Ljung 2016). The place name *köping* denotes a trading place and market for an organised and controlled market (Ljunggren 1937, 1965; Pellijeff 1988; Brink 2007) and it was used during the late 11th century for trading. Apparently, however, the area was demarcated much earlier and could be part of the early claims of a ruler guarding and protecting trade routes in the Baltic.

Öland in the Late Viking Age politics and alliances

Öland continues to behave as a borderland during the Viking Age and into Medieval times. Möre on the eastern mainland of Sweden was influenced by a Danish-type economy, while Öland was included in another type of sphere. The Viking trade across the Baltic towards the east involved Öland. The area is characterised by finds of weights adapted to the Arabic weight system. The heavy units in the form of so-called Permian silver rings that occur on Öland probably reflect the exchange of large volumes of goods that made the larger weight units functional; probably mainly furs but also perhaps processed iron (Hårdh 1996, 2016; cf. Söderberg 2013).

In a case study of the famous rune-stone at Karlevi, which was erected c. 1000 AD on the western shore of Öland, Anders Andrén (2007) emphasises its political dimensions and interprets it as a sign of a renewed period of Danish influence on Öland. The runes are cut in memory of the sea-king Sibbe, Fuldar's son, and the stone and a grave

mound were erected by his retinue (Söderberg & Brate 1900–1906:27 (Öl 1); Jacobsen & Moltke 1941–42:473–475). The name Fuldar is unique in a Scandinavian context, possibly used as a Nordic name in Anglo-Saxon England (Peterson 2007:71), although it has been understood as either the German male name Foldger or Anglo-Saxon Fulder (Jacobsson & Moltke 1941–42:473–475; cf. Andrén 2007:296–297). The runic text is partly in skaldic verse, dróttkvaett, and there is in addition also a Latin inscription, although it is unclear whether this is contemporaneous with the runic inscription. In a renewed interpretation of the place-name Karlevi, Per Vikstrand (forthcoming) has described this as 'the sanctuary of all free men, common sanctuary'. The rune stone was erected by a harbour, protected by a small island from the sea. Burial sites do normally not occur on the coast of Öland and Gotland, but when they do they are usually close to harbour sites (Fallgren 2006:132). The public, protected harbour and sanctuary of Karlevi was appropriate for use as burial site for a Danish sea-king, buried not by his relatives which would be the case at home, but rather by his retinue (Vikstrand forthcoming). The late Viking Age rune stones are in general often contemporaneous with the early Christian grave monuments on Öland, and furthermore the traditional burial grounds continued to be used during the 11th century alongside the early churchyards. This indicates, as Cecilia Ljung (2016:255) has shown, a lack of a strong central power and/or a fragmented land ownership that resembles the Gotlandic pattern.

Around 1100 Blekinge was permanently incorporated in the Danish realm and the border between the Swedish/Danish realms was in Kalmarsund, dividing also the arch-episcopates of Linköping and Lund (Blomkvist 2005:306). Some scholars believe that Öland was violently conquered and brought into the Swedish realm during this period (Fallgren 2006:181). This is an open question, but a strong Ölandic connection to the Danish kingdom may be indicated by the stone church of Resmo that was constructed on the western part of the island. Construction started in the 1080s, and it was the only church on Öland built of tufa stone imported from Denmark. It is also worth noting that the architecture of the church has parallels in Roskilde on Sjaelland (Boström 1999:86; Andrén 2007:299; Zachrisson 2015:129).

During the early 12th century, Öland could have belonged to the Vends in alliances with the Danish and Polish royal families (Blomkvist 2005:301–303). In the period 1170–1220 AD several of the old ringforts of Öland were re-built by the jarl of the Svear, Birger Brosa, and used in this period of politically unstability (Andrén 2007:299; Blomkvist 2005:335; Borg 2000), but raids from Danish kings, Estonian pirates, and other groups continued (cf. Andrén 2007:299). Öland was accessible, small, and easy to reach, and it occupied a very important position in the Baltic Sea. As such, it presented a continuing attraction to many powers, both as a source of alliances and as a dependency.

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References

Åberg, N. 1923. *Södra Kalmar län 1. Kalmar läns förhistoria.* Kalmar: Hjalmar Appeltofts bokhandel.

Alfsdotter, C., Papmehl-Dufay, L & Victor, H. 2018. A moment frozen in time: evidence of a late fifth-century massacre at Sandby borg. *Antiquity* Vol. 92, nr 362, pp.421–436.

Alfsdotter, C., & Kjellström, A. 2019. The mass killing at Sandby borg: Interpersonal violence and the demography of the dead. *European Journal of Archaeology* Vol. 22, nr 2, pp.210–231.

Anderbjörk, J. E. 1939. Nabberör i Böda. Undersökning av en märklig öländsk båtgrav. *Kalmar läns fornminnesförening. Meddelanden* XXVII 1939, pp. 62–72.

Anderbjörk, J. E. Report: Fasta Fornlämningar i Böda sn Öland. Unprinted archival report kept in ATA.

Andersson, Th. 2006. Daner and Svear: tribal rivalry in Scandinavia. In: *Names through the looking glass: Festschrift to Gillian Fellows-Jensen: July 5th, 2006*, P. Gammeltoft & B. Jørgensen (eds.). Copenhagen: Reitzel, pp. 1–20.

Andrén, A. 2007. A petrified patchwork: The rune stone at Karlevi and the early history of Öland. In: *On the Road: Studies in Honour of Lars Larsson,* B. Hårdh, K. Jennbert & D. Olausson (eds.). Stockholm: Almqvist & Wiksell International, pp. 295–300.

ATA = Antikvarisk-topografiska arkivet. Riksantikvarieämbetet, Stockholm.

Axelsson, R., Janzon, K. & Rahmqvist, S. (eds.). 1996. *Det medeltida Sverige 4:3. Öland*. Stockholm: Riksantikvarieämbetet/Kungliga Vitterhets Historie och Antikvitets Akademien.

Bateley, J. & Englert, A. (eds.). 2007. *Othere's voyages: a late 9th-century account of voyages along the coasts of Norway and Denmark and its cultural context*. Roskilde: The Viking Ship Museum.

Blomkvist, N. 2005. *The Discovery of the Baltic. The reception of a Catholic world-system in the European north (AD 1075–1225)*. Leiden: Brill.

Blomkvist, N. 2008. Spåren av en svunnen världskonjunktur. In: *Spillingsskatten – Gotland i vikingatidens världshandel*, A.-M. Pettersson (ed.). Visby: Länsmuseet på Gotland, pp. 155–186.

Blomqvist, M. 2000. *Svenska ortnamn i Estland med estniska motsvarigheter.* Skrifter utgivna av folkskolans vänner, vol. 158. Ekenäs: Folkskolans vänner.

Bohlin P. E. & Hagberg U. E. 1975. Romerska fynd från löt. *Öländsk bygd* 1975, pp. 3–22.

Borg, K. 2000. *Eketorp III:ett medeltidsarkeologiskt projekt.* University of Lund, report series, vol. 72. Lund: University of Lund, Department of Archaeology.

Boström, R. 1999. Is Resmo Church the earliest Stone Church in Medieval Sweden? In: *Europeans or not? Local level strategies on the Baltic Rim 1100–1400 AD. Transactions of the local level-symposium of the Culture Clash or Compromise (CCC) project held in Kalmar May 7–10, 1998*, N. Blomkvist & S.-O. Lindqvist (eds.). CCC papers 1. Visby: Centre for Baltic Studies, Gotland University College, pp.79-90.

Brink, S. 2002. Namn, landskap och bebyggelse i Rytternebygden. In: *Nya anteckningar om Rytterns socken. Medeltidsstudier tillägnade Göran Dahlbäck. Västmanlands fornminnesförenings årsskrift 78,* A.-C. Bonnier & O. Ferm (eds.). Västerås: Västmanlands läns museum, pp. 47–68.

Brink, S. 2007. Geography, toponymy and political organisation in early Scandinavia. In: *Othere's voyages:a late 9th-century account of voyages along the coasts of Norway and Denmark and its cultural context*. Roskilde: The Viking Ship Museum, pp. 66-73.

Cohen, S. 2003. *Geopolitics of the World System.* Lanham: Rowman & Littlefield Publishers.

Creutz, K. 2003. *Tension and tradition: a study of late Iron Age spearheads around the Baltic Sea.* Stockholm: Department of Achaeology, Stockholm University.

Devetak, R., Burke, A. & George, J. 2012. *An Introduction to International Relations*. 2. ed. Cambridge: Cambridge University Press.

Edberg, R. 2017. *Vikingar i österled. Gamla båtar moderna färdexperiment.* Stockholm Maritime reports, vol. 7. Stockholm: Stockholm University, Department of Archaeology and Calssical Studies.

Englert, A. & Trakadas, A. (eds.). 2009. *Wulfstan's Voyage: The Baltic Sea Region in the early Viking Age as seen from shipboard (Maritime Culture of the North)*. Roskilde: The Viking Ship Museum.

Fallgren, J. H. 2001. Böda socken. In: Ölands järnåldersgravfält, vol. 4. Böda, Högby, Källa, *Persnäs, Föra, Ventlinge, Gräsgård och Ås*, M. Rasch (ed). Stockholm: Riksantikvarieämbetet och Statens historiska museer, pp. 9–62.

Fallgren, J. H. 2006. *Kontinuitet och förändring. Bebyggelse och samhälle på Öland 200–1300 e.Kr.* Aun 35. Uppsala: University of Uppsala, Department of Archaeology and Ancient history.

Fischer, S. 2005. *Roman imperialism and runic literacy. The westernization of Northern Europe (150–800 AD).* Aun 33. Uppsala: Uppsala universitet.

Fischer, S. 2017. The material culture of 5th century returning veterans. In: *The Sösdala horsemen – and the equestrian elite of fifth century Europe.* Ch. Fabech & U. Näsman (eds.). Jutland Archaeological Publications Vol. 9. Aarhus: Jutland Archaeology Society, pp. 313–328.

Fischer, S. 2019. Ringborgarna på Öland och Romarrikets fall. *Medusa* vol 40:3, pp. 8–15.

Fischer, S. & López-Sanchez, F. 2016. Subsidies for the Roman West? The flow of Constantinopolitan solidi into the Western Empire and Barbaricum. *Opuscula*, vol. 9, pp. 249–269.

Fries, S. 1962. *Öländskt och uppsvenskt: en ord- och ortnamnsgeografisk studie över drag på Öland och längs Götalands östkust.* Vol. 3. Uppsala: Appelbergs boktryckeri.

Fritz, B. 1971. Sveahertigdömet – jarladömet. *Historisk tidskrift* 1971, pp. 333–351.

Guta saga = Guta Saga. The History of the Gotlanders. Peel, C. (ed.). 1999. Viking society for northern research text series, vol. XII. London: Viking Society for Northern Research, University College London.

Hårdh, B. 1996. *Silver in the Viking Age. A regional-economic study.* Acta archaeologica Lundensia. Series in 8°, 25. Stockholm: Almqvist & Wiksell International.

Hårdh, B. 2016. *The Perm'/Glazov rings. Contacts and economy in the Viking Age between Russia and the Baltic Region.* Acta archaeologica Lundensia. Series in 8°, 67. Lund: Lunds universitet, Institutionen för arkeologi och antikens historia.

Hedeager, Lotte. 2001. Europas delning. In: *Tusen års Europa historie. Romere, germanere og nordboere*, L. Hedeager & H. Tværnø (eds.). Oslo: Pax Forlag A/S, pp. 74–97.

Hedenstierna-Jonson, Ch. 2009. Rus, Varangians and Birka warriors. In: *The Martial society. Aspects of warriors, fortifications and social change in Scandinavia*, L. Holmquist-Olausson & M. Olausson (eds.). Theses and papers in North-European Archaeology B:11. Archaeological research laboratory. Stockholm: Stockholm University, pp. 158–177.

Hellberg, L. 1979. Forn-Kalmar: ortnamnen och stadens förhistoria. *Kalmar stads historia. 1, Kalmarområdets forntid och stadens äldsta utveckling: tiden intill 1300-talets mitt*. I. Hammarström (ed.). Kalmar: Kulturnämnden, pp. 118–166.

Hellberg, L. 1988. *Brynäs och den gotländska bryan: några gutniska terrängbeteckningar i ord- och namngeografisk kontext*. Meddelanden från institutionen för nordiska språk, vol. 28. Stockholm: Stockholms universitet, pp. 151–162.

Hellberg, L. 2011. Ordet nor i uppländska ortnamn. In: *Uppländska namnstudier: valda namnspalter ur Upsala Nya Tidning 1982–2002,* K. Leibring, S. Nyström & M. Wahlberg (eds.). Uppsala: Ortnamnssällskapet i Uppsala, pp. 47–50.

Hellberg, L. Manuscript. *Norplatserna.* Kept at Ortnamnsarkivet in Uppsala.

Herschend, F. 1980. *Myntat och omyntat guld:två studier i öländska guldfynd.* Uppsala: Gustavianum.

Hesselman, 1905. *Sveamålen och de svenska dialekternas indelning.* Uppsala: K. W. Appelbergs tryckeri.

Høilund Nielsen, K. 1991. Centrum og Periferi i 6.–8. årh. Territoriale studier af dyrestil og kvindesmykker i yngre germansk jernalder i Syd- og Østskandinavien. In: *Fra Stamme til Stat i Danmark, 2. Høvdingesamfund og Kongemagt*, P. Mortensen & B. M. Rasmussen (eds.). Jysk Arkæologisk

Selskabs Skrifter XXII:2. Aarhus Universitetsforlag. Viborg, Danmark, pp. 127–154.
Jacobsen, L. & Moltke, E. 1941–1942. *Danmarks runeindskrifter.* Copenhagen: Ejnar Munkgaards forlag.
Konsa, M., Vassiljev, J., Allmäe, R. & Maldre, L. 2009. Rescue excavations of a Vendel-era boat-grave in Salme, Saaremaa. In: *Archaeological fieldwork in Estonia 2008*, E. Oras & E. Russow (eds.). Tallinn: Muinsuskaitseamet, pp. 53–64.
Lindkvist, T. 1983. Gotland och sveariket. In: *Gutar och vikingar*, I. Jansson (ed). Stockholm: Statens historiska museum, pp. 281–287.
Lindkvist, T. 1988. *Plundring, skatter och den feodala statens framväxt: organisatoriska tendenser i Sverige under övergången från vikingatid till tidig medeltid.* Opuscula historica Upsaliensia, vol. 1. Uppsala: Uppsala University, Department of History.
Ljung, C. 2016. *Under runristad häll. Tidigkristna gravmonument i 1000-talets Sverige.* Stockholm studies in archaeology 67:1–2. Stockholm: Stockholm University.
Ljunggren, K. F. 1937. Köping, Köpinge och Kaupangr. *Namn och Bygd* 25, pp. 99–129.
Ljunggren, K. F. 1965. Köping. In: *Kulturhistoriskt lexikon för nordisk medeltid* Bd 10, I. Andersson & J. Granlund (eds.). Malmö: Allhem, pp. 106–109.
Lund Hansen, U. 1987. *Römischer Import im Norden. Waren austausch zwischen dem Römischen Reich und dem freien Germanien während der Kaiserzeit unter besonderer Berücksichtigung Nordeuropas.* Nordiske fortidsminder Serie B, 10. København: Det Kongelige Nordiske Oldskriftselskab.
Mägi, M. 2019. *Viking Eastern Baltic.* Leeds: ArcHumanities Press.
Magnusson, G. 2015. Järn i smålandet Möre. Kring teknik och bebyggelse i en medeltida skogsbygd. In: *Järnet och Sveriges medeltida modernisering*, B. Berglund (ed). Jernkontorets Bergshistoriska Skriftserie nr 48. Stockholm: Jernkontoret, pp. 369–397.
Näsman, U. 1984. *Glas och glashandel i senromersk tid och folkvandringstid:en studie kring hlas från Eketorp II, Öland, Sverige*. Aun 5. Uppsala: Gustavianum.
Nerman, B. 1958. *Grobin-Seeburg. Ausgrabungen und Funde* (Kungl. Vitterhets Historie och Antikvites Akademien). Stockholm: Almqvist & Wiksell.
Nylén, E. 1994. Tunas läge. In: *Tuna i Badelunda: guld, kvinnor, båtar,* E. Nylén & B. Schönbäck (eds). Västerås: Västerås kulturnämnds skriftserie, pp. 132-145.
Peets, J. 2003. *The power of iron production and blacksmithy in Estonia and neighbouring areas in prehistoric period and the Middle Ages.* Research into Ancient Times, 12. Tallinn: Tartu University.
Peets, J., Allmäe, R. & Maldre, L. 2011. Archaeological investigations of Pre-Viking Age burial boat in Salme village at Saaremaa. *Archeological fieldwork in Estonia* 2010, pp. 29–48.
Pellijeff, G. 1988. *Ortnamnen i Norrbottens län D. 11 Piteå kommun A Bebyggelsenamn*. Umeå: Dialekt-, ortnamns- och folkminnesarkivet i Umeå.
Peterson, L. 2007. *Nordiskt runnamnslexikon.* Femte reviderade versionen. Uppsala: Institutet för språk och folkminnen.
Price, T. D., Peets, J., Allmäe, R., Maldre, L. & Oras, E. 2016. Isotopic provenancing of the Salme ship burials in Pre-Viking Age Estonia. *Antiquity*, vol. 90, pp. 1022–1037.
Rimbert. *Vita Anskarii*. Cited from: *Boken om Ansgar. Rimbert: Ansgars liv.*

Transl. E. Odelman. 1986. Stockholm: Propius.

Røstad, I. M. 2016. *Smykkenes språk. Smykker og identitetsforhandlinger i Skandinavia ca. 400–650/700 e. Kr.* Oslo: University of Oslo, Institutt for arkeologi, konservering og historie.

Schulze, H. 2004. *Köpingsvik – 30 undersökningar 1970–1994. Arkeologiska undersökningar i Köpingsvik, utförda av Riksantikvarieämbetet och Kalmar läns museum. RAÄ 215, 216 m.fl. Köpings sn, Borgholms kn, Öland.* Arkeologiska enheten, rapport 2004:2. Kalmar: Kalmar läns museum.

Söderberg, A. 2013. Om stratigrafi, tomtmönster och hantverk i kvarteret Urmakaren Sigtuna. *Situne Dei* 2013, pp. 47–70.

Söderberg, S. & Brate, E. 1901–1906. *Ölands runinskrifter*, Sveriges runinskrifter 1. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien,

SOL = *Svenskt ortnamnslexikon.* 2003. M. Wahlberg (ed.). Uppsala: Språk- och folkminnesinstitutet (SOFI).

Snorri Sturluson. *Heimskringla. History of the Kings of Norway.* Transl. L. M. Hollander (ed.). 1964. Austin: University of Texas Press.

Snorri Sturluson. *Nordiska kungasagor* I–III. Transl. K. G. Johansson (ed.). 1991. Stockholm: Fabel.

Sundqvist, O. 2016. *An Arena for Higher Powers. Ceremonial buildings and religious strategies for rulership in Late Iron Age.* Leiden: Brill.

U + number = runic inscription published in Wessén, E. & Jansson, S. B. F. 1940–58. *Upplands runinskrifter* 1–4, Sveriges runinskrifter 6–9. Stockholm: Almqvist & Wiksell international.

Vikstrand, P. 2008. Äldre ortnamn i Össeby–Garns socken. In: *Namn från stad till land. Hyllningsskrift till Mats Wahlberg 25 maj 2008*, E. Brylla, E. & S. Strandberg (eds.). Uppsala: Uppsala universitet, pp. 189–201.

Vikstrand, P. 2019. Sveabod – ett märkligt ortnamn på Öland. In: *Tidens landskap:en vänbok till Anders Andrén.* Ljung, C. et al. (eds.). Lund: Nordic Academic Press, pp. 167–168.

Vikstrand, P. forthcoming. Karlevi. Festschrift to be published.

Wickham, C. 2009: *The Inheritance of Rome. Illuminating the Dark Ages 400–1000.* London: Penguin books.

Wilhelmsson, H. 2017. *Perspectives from a human-centered archaeology: Iron Age people and society on Öland.* Lund: Lund University.

Wilhelmsson, H. & Price, T. D. 2017. Migration and integration on the Baltic Island of Öland during the Iron Age. *Journal of Archaeological Science:* Reports 12 (2017), pp. 183–196.

Ynglingatal. Þjóðólfr inn fróði ór Hvini. A. Noreen (ed.). 1925. Kungliga Vitterhets, Historie- och Antikvitets Akademien, handlingar. 28:2. Stockholm: Kungliga Vitterhets, Historie- och Antikvitets Akademien.

Zachrisson, T. 2015. Stenansiktet vid Resmo källa. In: *Grävda minnen från Skedemosse till Sandbyborg*. K.-H. Arnell & L. Papmehl-Dufay (eds). Kalmar: Kalmar läns museum, pp. 128–139.

Zachrisson et al. forthcoming. Boat burials – locals or not?

Öl + number = runic inscription published in Söderberg, S. & Brate, E. 1911–18. *Ölands runinskrifter,* Sveriges runinskrifter 1. Stockholm: Almqvist & Wiksell international.

MAGNUS KÄLLSTRÖM

The typology of the short-twig runes and contacts in the Baltic Sea

Introduction

How the Viking Age runic alphabet came into being is still some kind of a mystery. We do not know who created this system, where it happened nor exactly when, and even if it is possible to have at least a rough idea about the last issue. Based on the archaeological finds available today, it looks like this must have occurred sometime around c. 700 AD.

Another mystery is why the Viking Age runic alphabet appears to have emerged in what looks like two different forms: one more elaborate and one simple. Today, we normally refer to them as long-branch and short-twig runes respectively (Fig. 1). These versions seem to be more or less contemporary, but were used in different parts of Scandinavia during the first two centuries of the Viking period. The long-branch runes are dominant in Denmark, whereas the short-twig runes occur in Sweden and Norway. In the runic literature these two variants are also called *danska runor* 'Danish runes' and *svensk-norska runor* 'Swedish-Norwegian runes', respectively, in accordance with their geographical distribution. Since they both comprise the same number of characters and follow the same set of orthographic rules there must still be a close relation between the two variants.

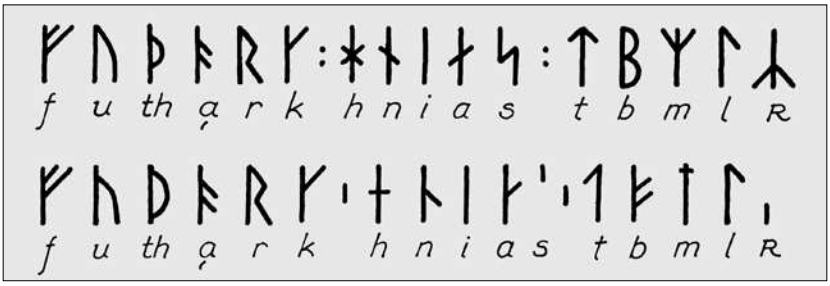


Fig. 1. The two main variants of the Viking Age futhark: the long-branch runes (above) and the short-twig runes (below). After Wessén 1957.

While the short-twig system is normally regarded as typical for the runic inscriptions in Sweden and Norway from the first two centuries of the Viking Age onwards, in reality this variant has been found in archaeological contexts encompassing a vast area stretching from Russia in the east to Greenland in the west. There are also some examples from Denmark, which shows that the geographical division between the two systems was not as absolute as it first might appear. The short-twig runes also show a considerable variation when it comes to the rune forms themselves, and some scholars have tried to sort the material into smaller groups based on this variation and to interpret them in chronological terms.

Gotland is home to about a third of all short-twig runic inscriptions found in Sweden, but these have generally (except for the Pilgårds stone, see Kilger in this volume) attracted rather sparse interest in the runic literature. One reason for this is certainly that many of the inscriptions are damaged and therefore difficult to both read and interpret. In this contribution, I will take a fresh look at these inscriptions in order to see what they might tell us about the development of the short-twig system. I will also discuss in detail some previously overlooked inscriptions with short-twig runes from Gotland, which have recently been revealed by the work of Sigmund Oehrl (2019).

Some ideas of the origin of the short-twig runes

As noted above, we do not know in which region the short-twig system originated. A researcher who pondered these problems was Otto v. Friesen, who returned to these issues in his publications several times and gradually changed his opinion on them. According to Henrik Schück (1904, 1:183), von Friesen assumed originally that the short-twig system was invented on the Isle of Man and spread from there to Scandinavia, but he soon abandoned this idea for other explanations. In his influential book *Upplands runstenar* from 1913 he offers the following picture of the development:

> Den svensk-norska futharken synes ha utbildat sig på Gotland, sprider sig därifrån till Östergötland, norra Småland, Mälardalen och Syd-Norge. Senare träffas den jämväl i Hälsingland och de norska vikingakolonierna på de brittiska öarna (von Friesen 1913:5).

> (The Swedish-Norwegian [i.e. the short-twig] futhark seems to have originated on Gotland, spreads from there to Östergötland, north Småland, the Mälar region and south Norway. Later on it is also found in Hälsingland and in the Norwegian Viking colonies in the British Isles.) [my translation]

When von Friesen returned to these issues twenty years later in the anthology *Runorna* (1933), he had changed his mind concerning Gotland as the birthplace of the short-twig runes. The reason for this was that, after a personal inspection of the inscriptions in question, he had found that they could not compete in age with the Rök stone (Ög 136) and inscriptions of the same type in southern Norway. He was also unable to find the same continuity in the development of these runes on Gotland as in Östergötland and Norway (von Friesen 1933:147).

When the previously hidden inscriptions on the Sparlösa stone (Vg 119) in Västergötland were discovered in 1937, von Friesen changed his opinion once again. Unlike the inscription on the front side, which consists of long-branch runes, the rest of the text mainly belonged to the short-twig system. Von Friesen (1940:98) noticed also that some characters of the latter had forms that he believed to be later developments. Since the Sparlösa stone was then the earliest dated inscription with short-twig runes, von Friesen (1940:99) assumed that the rune carver was familiar with the leading tendencies in the development of the runic script and he even suggested that he might have been the inventor of the short-twig runes. From this, it follows that the origin of this variant system should be sought in southwest Sweden.

Von Friesen's theory was developed by Bengt Loman (1965:53–56), who promoted the province of Bohuslän as the most likely place for the invention of this variant of the younger futhark. Loman pointed out that this area shows an unbroken continuity of runic knowledge, with some inscriptions in the older futhark as well as a few examples of early Viking Age runestones, where both the long-branch and the short-twig systems occur in early forms.

As early as the 1950s, Elias Wessén (1957:10–18) suggested that the two variants had nothing to do with the geographical distribution in the preserved material. He instead proposed that they served different purposes. The simpler short-twig runes were designed for everyday

writing on perishable material as wood, whereas the more elaborate and decorative long-branch types were intended for memorial inscriptions on stone. Since the two variants occupy different areas of use, he also thought that both might have originated in Denmark. This idea of the short-twig runes as a script created for practical purposes was further developed by Aslak Liestøl (1971). With the then recently discovered short-twig inscriptions on wood from the trading place Hedeby in mind, he suggested (Liestøl 1971:74 f.) that this variant was invented and used foremost by merchants. He also pointed out that "[v]ery many of these inscriptions have been found at or close by the ancient trade centres—Kaupang, Hedeby, Birka, Gotland and Starja Ladoga" (Liestøl 1971:75).

With this list of trading places in mind, it is not difficult to imagine a transmission of the short-twig runes through the Baltic with a starting point in Hedeby in the south. Thorgunn Snædal (2002:63) who studied the Gotlandic runic inscriptions in her dissertation, however, was reluctant to see the domination of the short-twig runes on Gotland as an influence from Denmark and has rather regarded them as the result of impact from Östergötland or possibly Birka in lake Mälaren.

Dating problems

It has long been recognized that the rune-forms among the short-twig runes are simpler than those of the long-branch system, and it has therefore been claimed that the short-twig runes must be a secondary creation (see recently Fridell 2011; cf. Barnes 2009). This assumption is not easy to corroborate by means other than through the study of typology as very few inscriptions can be dated archaeologically. A central point of the discussion, however, concerns the rune-inscribed skull fragment from the town of Ribe in South Denmark. According to recent investigations by Morten Søvsø (2013) the loss or deposition of this object can be narrowed down to *c.* 725-750 AD. The inscription consists of long-branch runes of the so-called Helnæs type and shows that this variant of the Viking Age runes was established in southern Denmark by the first half of the 8th century. There are no dated finds of short-twig runes with similarly early dates; the closest we get is the famous wooden stick from Hedeby (DR EM85;371B), which dates to somewhere in the 9th century. To judge from the archaeological finds of rune-inscribed objects known

today, it looks like there are about 50 to 100 years between the earliest attestations of these two variants of the Viking Age futhark.

In this discussion, it might be fruitful to remind ourselves of the Gotlandic picture stones, as some of them also bear runic inscriptions. When Sune Lindqvist published the material in *Gotlands Bildsteine* (1941–42) he divided it into five groups, named A–E. Except for an inscription with the older futhark on an A-stone from Martebo church (G 264), the runic inscriptions are restricted to the later groups called C–E. On the stones of type E, which represents the youngest type and belongs to the 11th century, the inscriptions consist exclusively of long-branch runes. On the picture stones of type C and D on the other hand, the majority of the inscriptions represent the short-twig system. The latter stones are normally dated to the period c. 700–1000, but Birger Nerman (1947:133–140) has argued that some of these stones might date as early as c. 650–700. If this dating of the rune-inscribed picture stones is correct, then it implies that the short-twig runes on Gotland might have been established earlier than the long-branch runes in Denmark. As far as I know, Nerman's dating of the rune-inscribed picture stones has not been followed by other researchers.

The set of characters used in short-twig runes were not as fixed as the stylized rune-rows reproduced in the handbooks (Fig. 1) might suggest. On the contrary, several of the runes show considerable variation. In her thesis on the short-twig runes *Stuttruner* (1968:14 f.), the Norwegian runologist Ingrid Sanness Johnsen suggested a typology for the short-twig runes based on this variation. Johnsen paid special attention to the length and position of the branches in the **ą**, **n**, **ɑ** and **b** runes, and divided this material into three groups named A, B and C (Fig. 2). In group A, which is the type of characters found for instance on the famous Rök stone (Ög 136), the runes have single-sided branches placed on the right side of the vertical: ᚨ ᚦ ᚴ ᚦ. Johnsen (1968, 15) suggested this to be the typologically the earliest group. Group B included inscriptions where the same runes have crossing branches (ᚾ ᚾ ᛁ ᚾ), which was perceived as a later development influenced by the forms of the **n**- and **ɑ**-runes in the long-branch system. In group C, the branches in the four selected runes are single-sided like in group A, but arranged on different sides of the vertical: ᚨ ᚦ ᛁ ᚾ. This group was recognized as the final stage in the development.

Fig. 2. The typology for the short-twig runes suggested by Ingrid Sanness Johnsen (1968). Illustration Magnus Källström, Swedish National Heritage Board.

Johnsen offers no reason why group A must be the earliest group, except for a short comment that the **b**-rune in variant ᚦ could formally have evolved from an angular ᛒ (Johnsen 1968:15). This view is probably dependent of an earlier account by Gerd Høst (1960:469), who claims that the form ᚦ **b** has evolved from "the early ᛒ" ("ᚦ *b* er utviklet av det eldre ᛒ."). Høst also regards the pair ᛡ **ą** : ᚧ **b** with crossing branches as secondary forms that were later simplified to ᚦ **o** : ᚨ **b**.

In a review of Johnsen's work, Aslak Liestøl (1969:176–178) – one of the opponents on her dissertation – questioned the suggested chronology. He referred to an article published by Bengt Loman (1965) three years earlier, where Loman had argued that the inscriptions with crossing branches must represent the earliest stage. Liestøl compared the inscriptions dated archaeologically in Johnsen's material and found that type B or inscriptions that can be characterized as 'mixed' rune rows (with the combinations A/B or A/B/C; Fig. 8a) dominate in the early Viking Age (i.e. before c. 925) and that C represents the latest type. This is a strong argument in support of Loman's view, although Liestøl conceded that it is based on a very small sample of inscriptions.

If the variation of the rune-forms identified by Johnsen does indeed accurately represent a chronological sequence, it is obvious that Loman's and Liestøl's theories offer the most coherent picture of their possible development. In the earliest group there are no fixed rules for the length of the branches since it is the position and the direction of these elements that is important for identifying the individual

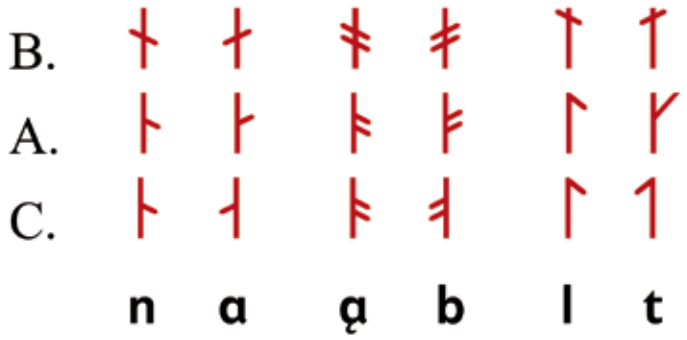


Fig. 3. The hypothetical development of the short-twig runes according to the present author. Illustration Magnus Källström, Swedish National Heritage Board.

grapheme. This is the kind of rune row found for instance on the Sparlösa stone (Vg 119) and the Hedeby stick (DR EM85;371B), which are dated to c. 800 and the 9th century respectively. Several of the runes in these inscriptions have crossing branches, which is the typical feature for group B. It is therefore tempting to assume that group B precedes the more regulated group A, which is the system found for instance on the Rök stone in Östergötland (Ög 136). In this stage there is a tendency for the runes to be homogenised by moving all the branches to the right side of the vertical. This resulted in oppositions like ᚾ : ᚾ and ᚿ : ᚿ. In some inscriptions such as the Kärnbo stone (Sö 176) or the Forsa iron-ring (Hs 7), this wish for conformity even affected the **t**-rune, which was given a form reminiscent of the **k**-rune (ᛕ).

It is possible that several of the runic characters with this arrangement of the branches became too similar and were therefore easily confused with each other. The solution to this problem was a new distribution of the branches where the different sides of the vertical were used as a resource which resulted in pairs like ᚾ : ᛅ, ᚿ : ᛅ and so on. This set of runes corresponds to Johnsen's group C, which became the most successful variant at least in western Scandinavia and in the British Isles.

A rough outline of the steps involved in a possible development within the short-twig system could then look something like the arrangement in Fig. 3 (if the first step with 'mixed' forms is excluded).

The relation between Johnsen's groups has also been discussed by Lisbeth Imer (2001 [publ. 2004]:94–96), who points out that the chronological period separating the use of group B runes and group C runes must be rather short. This assumption is based on indications that group B begins c. 750 and that the earliest dated example of group C is an inscription (N 134) from the Oseberg burial dated to 834. According to Aslak Liestøl (1969:178) the latter is not a proper runic inscription, but rather a row with vertical lines ("Oseberg er ikke noen runeinnskrift, bare en rekke streker"). The earliest dated inscription in group C would then be the bowl from Kaupang (N 579), which dates from the period c. 850–950 (Skre ed. 2007:123). It is likely, however, that the comb from Elisenhof in Germany (DE EM85;370), which is missing from Johnsen's corpus, should also be included in group C. According to Imer (2007, 2:76) this object can be dated to c. 775–875. The inscription is very short and consists only of a single word: **kąbr** *kambr* 'comb'.

The short-twig runes on Gotland

Despite the fact that the short-twig runes were the prevailing writing system in Sweden and Norway during the first two centuries of the Viking Age, the corpus of inscriptions is not very extensive. In all, only about forty inscriptions with this kind of runes are known from present-day Sweden, and most of them are on runestones (Källström 2013:106, cf. Åkerström 2017:38–47). These inscriptions are scattered from Scania in the south to Hälsingland in the north, but there are some clusters in the province of Östergötland, the town of Birka in Uppland, and on the island Gotland. As mentioned previously, about a third of these come from Gotland and the majority appear on Gotlandic picture stones. Nine of these inscriptions are published in *Gotlands runinskrifter* (G 109, G 110, G 157, G 248, G 252, G 266, G 268, G 305, G 310), but there are at least three or four additional inscriptions missing in the present edition. The first one occurs on a picture stone, which was cut into five pieces and now serves as paving stones in front of the altar in Väskinde church (Oehrl 2019, 1:295). The original size of the stone is estimated to have been no less than 5.5 metres in length, and it represents probably the tallest picture stone ever recorded on Gotland. This stone was first observed during the restoration of the

Fig. 4. The picture stone from Väskinde church that was found in the floor of Väskinde church in 1953. Photo Harald Faith-Ell 1953, © Gotland Museum.

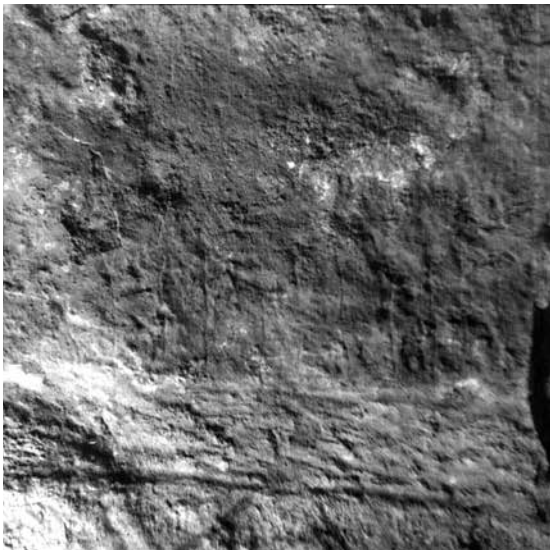


Fig. 5. The inscription on the picture stone from Väskinde church without colour. Photo Ulla Silvén 1953, © Gotland Museum.

church in 1953. Most of the carving is worn or cut away, but when the floor tiles at the top were removed it was revealed that some of carving, including both pictures and the remnants of a runic inscription, were preserved on the parts previously hidden (Fig. 4). The runic inscription was only mentioned very briefly in a newspaper article in *Gotlands folkblad* in 1953 and in a somewhat later article by Sune Lindqvist (1956:30), and it has therefore remained unknown until very recently. Since the steps were restored after the renovation, the carved part of the stone is now inaccessible, and our knowledge of these runes is restricted to a couple of photographs from 1953, which are housed in the archives of Gotland Museum (Fig. 5).

The second picture stone serves as a floor tile in the chancel of Eskelhem church. The pictures and the runes were first observed in 1984 (Böttger-Niedenzu & Niedenzu 1988:6 f.) but the inscription was not examined until 2015 (Oehrl 2019:1:278). A third example comes from Halla church. This picture stone is incorporated into the floor of the chancel and the possible runic inscription was first noticed in the 1980s (Böttger-Niedenzu & Niedenzu 1988:9 f., Oehrl 2019, 1:275, 2, Tafel 331a).

Finally, some severely damaged runes have recently been detected on a picture stone from Stenkyrka church (Kitzler Åhfeldt 2013:1), but only one single character (a **þ**-rune) can be read with any confidence. Since the position of this inscription on the stone looks rather odd, it

is difficult to determine if it is contemporary with the pictures on the stone or whether it represents a later addition.

The Gotlandic corpus of inscriptions with short-twig runes also includes two limestone fragments from Stenhuse in Sanda parish (G 186, G 187), which must be the remnants of some kind of stone monuments. The runestone from Pilgårds in Boge parish (G 280) stands alone in this context. It consists of a rather small rounded boulder of granite with the runes arranged in straight vertical lines in a manner known from other early Viking Age runestones, such as the Rök stone (Ög 136) in Östergötland. Some inscriptions in short-twig runes have also been incised on portable objects. Along with the famous spearhead from Svenskens in Endre parish (or possibly Veda in Follingbo parish, G 225), the most important inscription is on an animal-head brooch from an unknown place on Gotland (G 355, see Kitzler Åhfeldt in this volume), which has been typologically dated to the 9th century. The text reads **i-kiskati**, which with some hesitation is interpreted as *Ingi es skati* "Inge is a chieftain'. Another rune-inscribed brooch of similar type from the 10th century was found in an inhumation grave at Fröjel (G 389). From the very short inscription (**kika**, possibly the same word as OWN *kinga* 'brooch', see Källström 2016:75), however, it is impossible to tell which variant the runes should be attributed to. Finally there is an upper guard of antler (G 353), also of unknown Gotlandic provenance, with some runes and rune-like signs (SHM 10498, Androshchuk 2014:87, 327). The form of the guard is typical for a sword type (type B) normally dated to late Vendel or early Viking period (Androshchuk 2014:42–46).

Runes occur also as graffiti on Arabic coins found on Gotland (Hammarberg & Rispling 1985), but this material has not yet been the subject of a proper runological investigation. I recently had the opportunity to study a couple of these coins in the collections of the Historical Museum in Stockholm. One is a silver dirham struck 910–911 from a hoard with tpq 1102 found at Mannegårde in Lye parish (SHM-KMK 11300, Object No. 3001033; Fig. 6). The inscription consists of the sequence **þur**, probably representing the name of the god *Þōrr*. The low branch in the **u**-rune suggests that the runes belong to the short-twig system. The second specimen (KMKs, Object No. 3000362) is an unprovenanced (possibly not even found on Gotland) imitation of a

Fig. 6. The silver dirham from Mannegårde in Lye parish with the inscription **þur**. Foto Ola Myrin, Swedish History Museum.

silver dirham dated to *c.* 901–920 with the text **lutiʀ** or probably just **luti** with the same kind of **u**-rune and a **t** with a single-sided branch. If the first reading is correct, the runes might render a counterpart to OWN *Lytir* known from Flateyjarbók as a name of a god worshiped by the *svíar*, who also seems to be attested in some place names in Sweden (Vikstrand 2001:390–393). With the second reading **luti** it might instead be a connection to the noun OWN *lýti* 'fault, blemish; disgrace'.

When it comes to the form of the individual runes, most of the short-twig inscriptions on Gotland belong to Johnsens group B with crossing branches. Only two (G 109, G 110) represent group C, whereas group A seems to be missing. This explains why von Friesen abandoned his early idea that the short-twig system originated on Gotland. The two types also occupy different parts of the island. The variant with crossing branches occurs on northern Gotland, whereas the two examples from group C are found in Ardre parish on the southeast coast.

The set of runes used in the inscription on the spearhead from Svenskens (G 225) looks like a mix of all three groups. Some of the characters such as **n**, **a** and **b** have crossing branches typical for group B, but **n** and **a** occur also with single-sided branches like the inscriptions in

group C. The **t**-rune has the shape ᚴ typical for group A, which is not otherwise attested on the island. Finally, the inscription includes also a tripartite **s**-rune (ᛋ) of the long-branch system and an **ą**-rune, which resembles ᚨ, also foremost a long-branch character.

Two previously neglected new finds from Gotland

The picture stone from Eskelhem church

The previously overlooked inscription on the stone from Eskelhem church (Fig. 7) follows the overall pattern for the inscriptions with short-twig runes on Gotland. Of the diagnostic rune-forms **n**, **a**, **t** and **b** are attested and three of them have crossing branches, whereas the branch in the **t**-rune descends from the top of the vertical (ᛏ). The runes for **f** and **k** have low branches, which is also characteristic for the short-twig system. I examined the inscription in April 2019 and produced the following reading (cf. Oehrl 2019:279 f.):

...--a-baki---saaft-...-a-stai-ᚷ

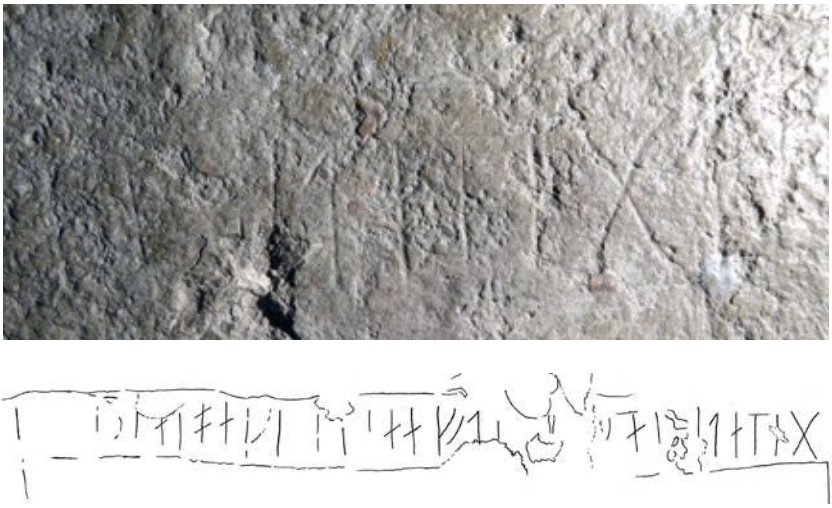


Fig. 7. The picture stone from Eskelhem church. Detail of the runes **a-stai-** in the last part of the inscription with the X-shaped termination mark at the end and a tracing of the whole inscription by the author. Photo and drawing by Magnus Källström, Swedish National Heritage Board.

Despite the fact that only 15 runes are possible to read with any confidence, this is doubtless the remnants of a meaningful inscription. The rune sequence **aft** represents (as Oehrl (2019:280) has pointed out) the preposition *aft* (or possibly the later variant *æftiʀ*) 'in memory' and the last five runes **stai-** is most probably the remains of a form of the word *stæinn* 'stone' or a personal name comprising this name element. The runes **sa** preceding **aft** might be the last part of a demonstrative pronoun such as *þessa* or the like. The inscription concludes with an X-shaped figure (Fig. 7). Oerhl understands this to be a representation of a **g**-rune from the older futhark, but it is more likely that it should be interpreted as a termination mark. A sign with a similar shape occurs in the same position in the short-twig inscription on the Kärnbo stone (Sö 176). The occurrence of this kind of sign on the Eskelhem stone substantiates my earlier suggestion that the X-shaped character previously construed as a **g**-rune on the picture stone from Gothem church (G 157) is not a rune but rather a word divider separating two parts of the inscription, which are written in different directions (see Källström 2012:123).

A peculiar thing with the Eskelhem stone is that the runes in the text band are upside down. According to Oehrl (2019:280), this shows that they were carved before the stone was erected and he considers this as proof for the inscription being contemporary with the pictures on the stone. I find such a mistake in the production of a rune-inscribed stone highly unlikely and it is – as far as I know – unparalleled in the runic corpus. A more likely explanation is that the stone was used in a secondary context and that the runes were later added once the pictures had lost their meaning or were perceived as unimportant.

The picture stone from Väskinde church

On the large picture stone from Väskinde church the runes occupied the horizontal lintel in the lower part of the stone, just above the chequered sail of a large ship. From the photo by Harald Faith-Ell from 1953 (Fig. 4), in which the runes are coloured, only a few characters can be made out:

...ṷ-ḟ-h-----...

With this limited amount of runes left, it is impossible to determine to which variant of the futhark the inscription belongs, but the **h**-rune (ᚼ) has the form prevalent in the long-branch system. In the archive of Gotland Museum there are a few pictures of the inscription taken before the stone was painted, but on these only the verticals of the runes are clearly visible (Fig. 5). On the other hand, these photos show that the lines on the left side of the possible **f**-rune should not be interpreted as a division mark as suggested by Oehrl (2019, 296), but rather as the remnants of a rune. The branches of the suggested **h**-rune could only be discerned on one of these pictures, and it is not impossible that the alleged branch sloping down to the right is in fact a part of a longer rift or a natural structure in the stone surface that crosses the vertical at this point. This would turn the character into an **a**-rune with crossing branch (ᛏ).

The short-twig runes on Gotland in a wider context

As stated above, the variant that Johnsen has called B is the dominant system on Gotland (Fig. 8b). This set of short-twig runes is rather rare on the Swedish mainland, but they are found in inscriptions from Birka in Uppland (one fragment under U 9), Östergötland (Ög 38, Ög 117) and Småland (Sm 20†). There are also some examples in western Scandinavia: the Hoga stone on Orust in Bohuslän (Bo Peterson1992), the copper bowl from Gokstad in Vestfold (N 139), the Ryen stone in Vest Agder (N 208) and the Tu stone in Rogaland (N 228). All the latter find spots are situated along the coastline and the only alleged representative of this group from the Norwegian interior is the now-lost Gran stone in Oppland (N 64). The regular word separation in this inscription together with the shape of the word dividers (⁙) and the form of the **ǫ**-rune (ᚿ instead of the expected ᚾ) makes it more likely that this stone belongs to a later period.

The only Norwegian example in group B that can be dated archaeologically is the short inscription on the copper bowl from Gokstad (N 139), which is safely dated to the first decade of 10th century (Bonde 1997:97–99). This makes the inscription about hundred years younger than the Sparlösa stone.

The geographical distribution of the short-twig inscriptions in group B can be reconciled with von Friesen's (1940:99) latest hypothesis that the short-twig system was invented by the master behind the Sparlösa

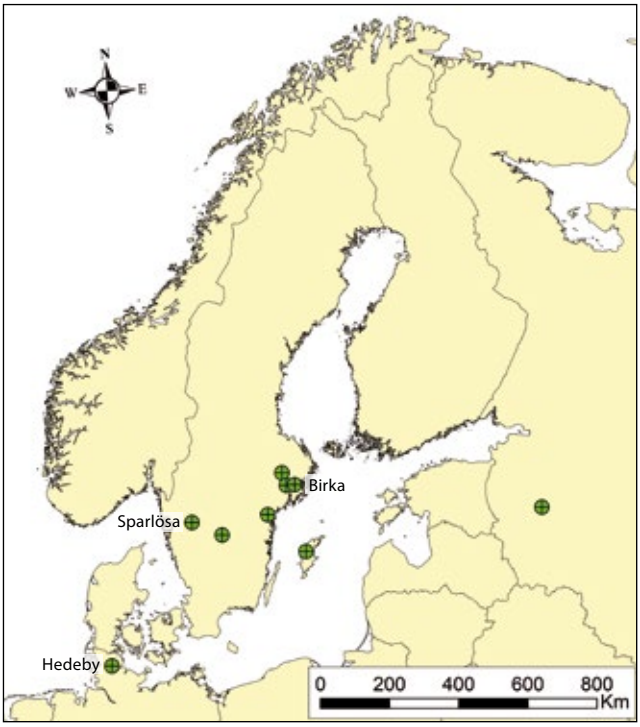
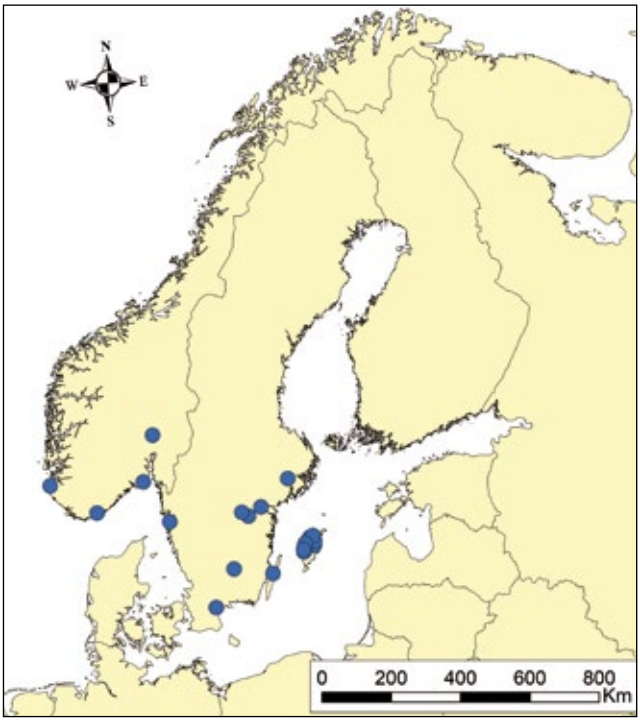
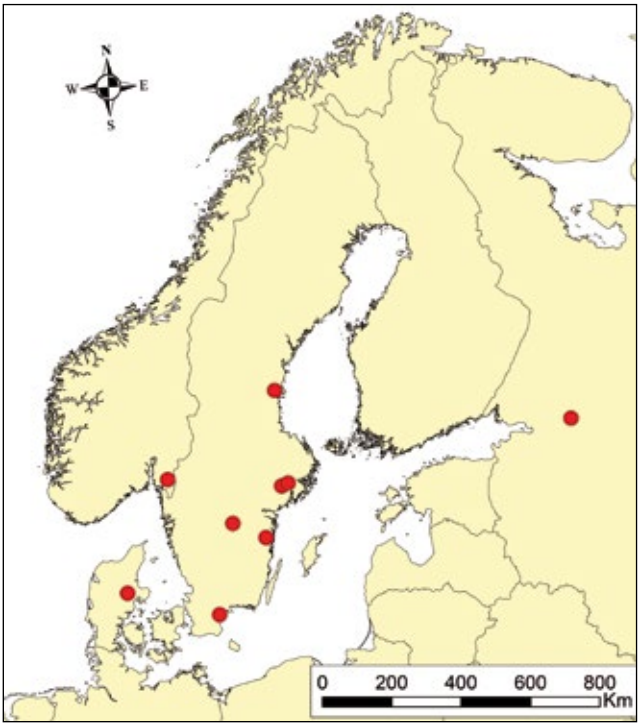


Fig. 8 a–d. Distribution of short-twig runes, ordered according to a hypothetical chronology by the present author. Maps Laila Kitzler Åhfeldt, Swedish National Heritage Board.

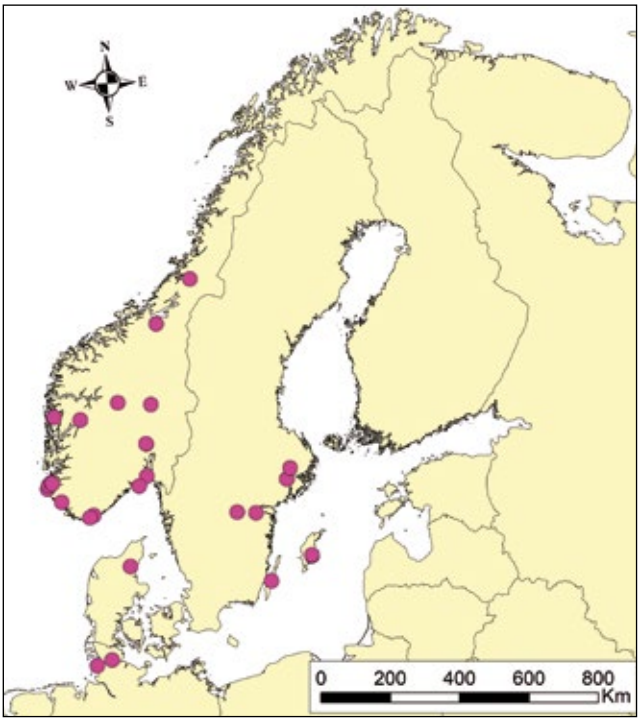
a) Mixed group.



b) Group B.



c) Group A.



d) Group C.

stone in Västergötland and then spread along the coasts to Sweden and Norway. If this is the case, this rune row must have developed along two different lines when the branches were reduced and fixed in length. In eastern Scandinavia there was a tendency of moving all the branches to the right side of the vertical (group A; Fig. 8c), whereas the rune-carvers in western Scandinavia favoured another solution where the different sides of vertical was used as an additional resource to discriminate between different graphs (group C; Fig. 8d).

Another possible scenario is that the short-twig system has its origin in eastern Scandinavia around the trade routes in the Baltic Sea. The town of Hedeby with its connections in all possible directions is then probably the best candidate as the place for this invention, but due to the number of inscriptions belonging to group B on Gotland, this area should not be disregarded.

In the inscriptions of group B there are a few examples of characters from the long-branch system. The Slaka stone (Ög 117) in Östergötland has an **h**-rune with the form ᚼ and on the Hoga stone in Bohuslän both ᛘ **m** and ᛦ **R** occur. The same pattern is found in the inscriptions from Gotland. On the Lokrume stone (G 252) there is besides ᚼ **b** also a **b**-rune with the shape ᛒ (see Oerhl 2019 1:276). Photographs of the now hidden picture stone in Väskinde church show a rune with the shape ᚼ, which correspond to the **h**-rune (or possibly the early **A**-rune) in the long-branch system. The almost illegible runic inscription on the picture stone at Riddare in Hejnum (G 248) might, according to photographs, have included an **s**-rune in the variant ᛋ (see Lindquist 1941-42, 1: fig. 79, 80).

This influence from the long-branch runes is not surprising if we assume that the short-twig variant was rather new at the time and still being developed. The most interesting example in this connection is the **R**-rune on the Hangvar stone G 310, which looks like a combination of the forms in the two different systems (ᛦ and ı). The rune has two branches at the bottom like in the long-branch system but the vertical is only half-height (Källström 2012:122 f.). This variant is also attested on the copper amulet from Staraja Ladoga (Pereswetoff-Morath 2019: 272–291), where it occurs along with mirror-runes based mainly on the short-twig system but also including graphs for **M**, **H** and **ą** belonging to the earliest variant of the long-branch system.

I do not believe these observations are sufficient to claim that the short-twig runes originated on Gotland as von Friesen suggested in one of his earliest accounts. At the same time, it shows that an early version of short-twig system (corresponding to Johnsens group B) was well-established on the island at least from the 9th century. Since the Gotlandic picture stones of type C and D can be as old as the 8th century it is not unlikely that some of the inscriptions on these stones might compete in age with the Sparlösa stone, which is normally dated to about 800. If this is the case, then we should not exclude the possibility that the runic tradition on Gotland influenced the set of runes used on the Swedish mainland, which might have implications for the dating of some central runic monuments such as the Rök stone (Ög 136). At the same time, it seems like the variant used on Gotland was more stable than for instance in Östergötland, where none of the seven known short-twig inscriptions shows exactly the same set of rune forms. On Gotland the Pilgårds stone (G 280), normally dated to the second half of the 10th century or around year 1000 (Snædal 2002:53 f.), still adopts a system typical for group B.

Our knowledge of the development and use of the runic script in the two first centuries of the Viking Age is still very fuzzy and is founded on a very limited amount of inscriptions. As this contribution hopefully has shown, the often-neglected material from Gotland is of great importance in this discussion, despite the fragmentary state of many inscriptions. The Gotlanders did not only cut their runes on memorial stones, but used them also on their jewellery and weapons. This shows that the runic script had a practical function in the early Viking Age society on the island, which can reconcile with Liestøl's ideas of the short-twig futhark as a writing system created by tradesmen. Inscriptions like *kinga* 'brooch', *Ingi es skati* 'Inge is a chieftain' or just the name of the god *Þōrr* might seem rather meaningless today, but they are probably just vague reflections of what the runes could be used for. Most of the everyday texts created in this period were certainly cut in perishable material as wood or possibly birch bark and are for obvious reasons long gone (cf. Kilger in this volume).

About 20 early Viking Age runic inscriptions from Gotland may not impress so much, but compared to what the two other major islands in the Baltic – Bornholm and Öland – have produced from the same

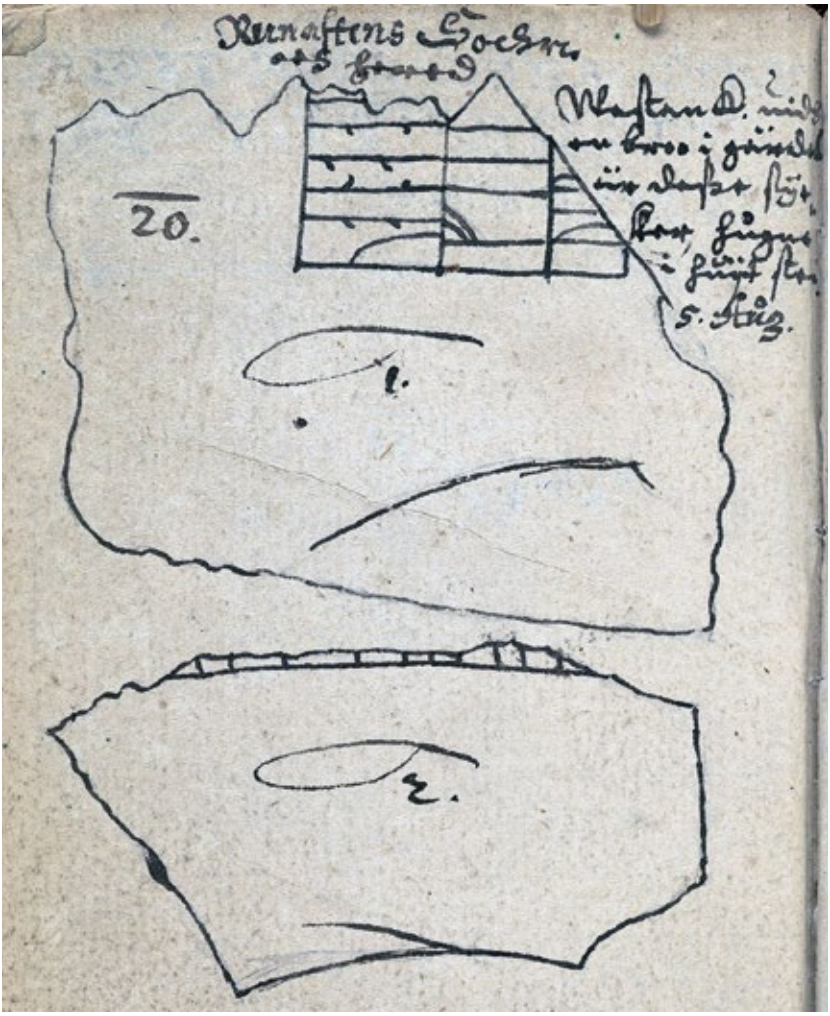


Fig. 9. The now lost runestone Öl 33 from Runsten on Öland. Drawing by Jonas Håkansson Rhezelius 1634 in the manuscript F c 5 in the Royal Library. Photo: Royal Library in Stockholm.

period, this is in fact a great amount. No early inscriptions in short-twig runes are known from Bornholm, and Öland only has two or three. Two copper plates with runic inscriptions (Öl BN83, Öl BN84, see Pereswetoff-Morath 2019:225– 227) are found in the inventory of the famous woman-grave from Klinta in Köpingsvik, dated to c. 900–950. The longest of these inscriptions consists definitely of short-twig runes, which probably belongs to group B. The inscription is much worn and

cannot be interpreted with any confidence, but it seems likely that it once contained a meaningful text. The remaining short-twig inscription on Öland is a now lost runestone (Öl 33) from Runsten parish on the east coast of the island. This stone was first depicted in 1634 by Jonas Håkansson Rhezelius, who recorded two fragments used as a bridge over a stream (Fig. 9). The largest of this fragments was still extant in the end of the 19th century, when it was examined by Sven Söderberg (Sven Söderbergs arkiv). Only the base of the runestone with the beginning of three vertical lines with remnants of a runic inscription was then preserved. From Rhezelius' drawing it seems likely that the runes were of the short-twig type, and Johnsen (1968:120f.) has even with some hesitation attributed them to group C.

Some researchers have suggested that the place name *Runsten* originates from this stone (see Elmevik 2001), which at first might seem surprising when we look at what is known about this stone. It should then be kept in mind that the fragment examined by Söderberg was no less than 185 centimetres wide and that about a metre of the 134 centimetres preserved in height consisted of the stone's uncarved root. The size of this root indicates that this runestone must originally have been rather tall, perhaps about 3 metres above ground. This assumption is supported by the runes that measured between 22 and 31 centimetres, a height that exceeds even the largest runes on the Rök stone (Ög 136).

The runestone at Runsten on Öland was probably originally a very impressing and widely visible monument. The original position is unknown, but it is likely that it served as some kind of landmark for those who travelled on land and possibly – with the flat landscape in mind – also by sea. If the stone originally marked a landing place or a harbour on the east coast of the island, it was directly connected to the trade routes that Aslak Liestøl suggested as vital for the rapid dissemination of the short-twig runes in this part of Scandinavia.

References

Androshchuk, F. 2014. *Viking swords. Swords and Social Aspoects of Weaponry in Viking Age Societies*. Stockholm: Historiska museet.

Barnes, M. 2009. The Origins of the Younger Futhark: A Review of Recent and Less Recent Research. In: *NOWELE: North-Western European Language Evolution* 56/57, pp. 123–42.

Bo Peterson1992 = Runic inscription from Hoga, Stala parish, Bohuslän, published in Peterson, L. 1992. Hogastenen på Orust. In: *Blandade runstudier* 1. Uppsala: Institutionen för nordiska språk, Uppsala universitet, pp. 81–111.

Bonde, N. 1997. Dendrochronological Dating of the Viking Age Ship Burials at Oseberg, Gokstad and Tune, Norway. In: *Archaeological Science 1995. Proceedings of a conference on the scientific techniques to the study of archaeology, Liverpool, July 1995,* A. Sinclair, E. Slater & J. Gowlett (eds.), pp. 195–200.

Böttger-Niedenzu, B. & Niedenzu, A. 1988. Neufunde Gotländischer Bildsteine 1981–1985. *Skandinavistik. Zeitschrift für sprache, literatur und kultur der nordischen länder* 18:1, pp. 1–24.

DE EM85;370 = Runic inscription from Elisenhof, Tönning in Kreis Nordfriesland, published in Moltke 1985, p. 370.

DR EM85;371B = Runic inscription from Haddeby, Busdorf in Kreis Schleswig-Flensburg published in Moltke 1985, pp. 371.

Elmevik, L. 2001. Runsten. *Saga och Sed* 2000, pp. 79–83.

Fridell, S. 2011. Graphic variation and change in the younger futhark. *NOWELE: North-Western European Language Evolution* 60/61, pp. 69–88.

Friesen, O. von. 1913. *Upplands runstenar: en allmänfattlig öfversikt*. Uppsala: Akad. bokh.

Friesen, O. v. 1933. *Runorna*. Nordisk Kultur 6. Stockholm: Bonnier.

Friesen, O. von. 1940. *Sparlösastenen. Runstenen vid Salems kyrka Sparlösa socken Västergötland. Läst och tydd.* Stockholm: Wahlström & Widstrand.

G + number = runic inscription published in Jansson, S. B. F., Wessén, E. & Svärdström, E. 1962–78. *Gotlands runinskrifter* 1–2, Sveriges runinskrifter 11–12. Stockholm: Almqvist & Wiksell international. – Numbers over 222 are published in *Gotlands runinskrifter* 3, preliminary manuscript by H. Gustavson & Th. Snædal available on the website of Swedish National Heritage Board <https://www.raa.se/kulturarv/runor-och-runstenar/digitala-sveriges-runinskrifter/gotlands-runinskrifter-3/>

Gotlands folkblad 15/7 1953 (Gotlands största bildsten funnen i Väskinde kyrka).

Hammarberg, I. & Rispling, G. 1985. Graffiter på vikingatida mynt. *Hikuin* 11, pp. 63–78.

Høst, G. 1960. To runestudier. *Norsk Tidsskrift for Sprogvidenskap* 19, pp. 418–554.

Imer, L. 2001 [publ. 2004]. Gotlandske billedsten – dateringen af Lindqvists gruppe C og D. *Aarbøger for Nordisk Oldkyndighed og Historie* 2001, pp. 47–111.

Imer, L. 2007. *Runer og runeindskrifter. Kronologi, kontekst og funktion i Skandinaviens jernalder og vikingetid.* 1–2. København: Det Humanistiske Fakultet, Københavns Universitet.

Johnsen, I. Sanness, 1968. *Stuttruner i vikingtidens innskrifter*. Oslo: Universitetsforlaget.

Kitzler Åhfeldt, L. 2013. *3D-skanning och RTI-mätning av bildsten med runor från Stenkyrka*. Visby: Riksantikvarieämbetet.

Källström, M. 2012. Gotlandic Picture Stones as Sources for Runology and the History of Scandinavian Languages. *Gotländskt Arkiv* 2012, pp. 119–128.

Källström, M. 2013. Vikingatida och medeltida skrifttraditioner: Några iakttagelser med utgångspunkt i det svenska runmaterialet. *Futhark: International Journal of Runic Studies* 4, pp. 102–128.

Källström, M. 2016. Viking Age runes. In: *We call them Vikings*, G. Andersson (ed.). Stockholm: Historiska, pp. 72 –79.

Liestøl, A. 1969: Review of Johnsen 1968, *Norsk Tidsskrift for Sprogvidenskap* 23, pp. 171–180.

Liestøl, A. 1971. The Literate Vikings. In: *Proceedings of the sixth Viking congress*: *Uppsala 3–10 August, Bonäs, Dalarna 10–12 August 1969*, P. G. Foote & D. Strömbäck (eds.). London: Viking society for Northern research, University college, pp. 69–78.

Lindqvist, S. 1941–1942. *Gotlands Bildsteine*. 1–2. Stockholm: Wahlström & Widstrand.

Lindqvist, S. 1956. Bildstensfynd vid kyrkorestaureringar. *Gotländskt Arkiv* 1956, pp. 19–30.

Loman, B. 1965. Rökrunorna som grafematiskt system. *Arkiv för nordisk filologi* 80, pp. 1–60.

Moltke, E. 1985. *Runes and Their Origin, Denmark and Elsewhere*. Copenhagen: Nationalmuseets forlag.

N + number = runic inscription published in M. Olsen et al., 1941–, *Norges innskrifter med de yngre runer*. 1–. Oslo: Norsk historisk kjeldeskriftinstitutt.

Nerman, B. 1947. Arkeologisk datering av vendeltidens nordiska runinskrifter. *Fornvännen* 42, pp. 109–141.

Oehrl, S. 2019. *Die Bildsteine Gotlands Probleme und neue Wege ihrer Dokumentation, Lesung und Deutung*. 1–2. Friedberg: Likias.

Pereswetoff-Morath, S. 2019. *Viking-Age Runic Plates. Readings and Interpretations.* Uppsala: Kungl. Gustav Adolfs akademien för svensk folkkultur/Institutionen för nordiska språk, Uppsala universitet.

Schück, H. 1904. *Studier i nordisk litteratur- och religionshistoria*. 1–2. Stockholm: Geber.

Skre, D. (ed.) 2007. *Kaupang in Skiringssal*. Århus: Aarhus University Press.

Snædal, Th. 2002. *Medan världen vakar: studier i de gotländska runinskrifternas språk och kronologi*. Runrön 16. Uppsala: Institutionen för nordiska språk, Uppsala universitet.

Sm + number = runic inscription published in Kinander, R. 1935–61. *Smålands runinskrifter*, Sveriges runinskrifter 4. Stockholm: Almqvist & Wiksell international.

Sö + number = runic inscription published in Brate, E. & Wessén, E. 1924–36. *Södermanlands runinskrifter*, Sveriges runinskrifter 3. Stockholm: Almqvist & Wiksell international.

U + number = runic inscription published in Wessén, E. & Jansson, S. B. F. 1940–58. *Upplands runinskrifter* 1–4, Sveriges runinskrifter 6–9. Stockholm: Almqvist & Wiksell international.

Wessén, E. 1957. *Om vikingatidens runor.* Stockholm: Almqvist & Wiksell.

Vg + number = runic inscription published in Jungner, H. & Svärdström, E. 1940–70. *Västergötlands runinskrifter*, Sveriges runinskrifter 5. Stockholm: Almqvist & Wiksell international.

Vikstrand, P. 2001. *Gudarnas platser. Förkristna sakrala ortnamn i Mälarlandskapen.* Uppsala : Uppsala University.

Åkerström, H. 2017. Det tidigvikingatida runmaterialet: En inventering. *Futhark: International Journal of Runic Studies* 8, pp. 7–88.

Öl + number = runic inscription published in Söderberg, S. & Brate, E. 1900–1906. *Ölands runinskrifter,* Sveriges runinskrifter 1. Stockholm: Almqvist & Wiksell international.

Öl BN + number = runic inscription published in Nilsson, B. E. 1973 (1975). *The Runic Inscriptions of Öland*. Ann Arbor, Michigan: Xerox University microfilms.

Ög + number = runic inscription published in Brate, E. 1911–18. *Östergötlands runinskrifter,* Sveriges runinskrifter 2. Stockholm: Almqvist & Wiksell international.

LAILA KITZLER ÅHFELDT

Islanders' attitudes to runic script – personal objects with runic inscriptions on Öland, Gotland and Bornholm

Introduction

On the Baltic islands of Öland, Gotland and Bornholm, people seem to have cherished differing views on what runes should be used for. Runes have been found used on different categories of objects and in different contexts. Runic objects show relations between sites and regions on several levels, i.e. the runic inscription, the artefact and the context – i.e. where and in what circumstances it was produced, used and found – united into the same object. Runic objects therefore have an under-explored potential for the study of the Viking Age that goes beyond what can be gained from the runic inscription only.

The three islands of Öland, Gotland and Bornholm have some characteristics in common, ranging from richness in Roman gold and late silver hoards (see Papmehl-Dufay and Kilger in this volume), to a large number of fortifications, and their strategic situation along the major trade routes in the Baltic Sea. Evidence for the use of a prolonged bullion economy, runestones and furnished Christian burials seem to indicate a lingering Viking mindset. On closer examination, however, several distinctions between the islands are also clear. For example, while Öland and Gotland share the tradition of stone-built, three-aisled longhouses during the Roman Iron Age, fortifications were constructed according to completely different traditions (see Papmehl-Dufay in this volume). Ludvig Papmehl-Dufay has further called attention to the fact that the imports of Roman solidi reach their heights in different periods: when imports cease on Öland they increase on Gotland, suggesting the existence of different and perhaps competing networks (ibid).

Clear distinctions can be seen in the runic objects as well. Actually, as far as the runic objects are concerned there seem to be few links between the islands; rather there are clear differences. Apart from

runestones, which turn outwards and might be said to represent a more official use of runic script, there is also evidence for more discrete runic inscriptions on personal objects such as brooches, amulets and whetstones. The artefacts chosen reflect interesting differences in the use of runes and, by extension, in attitudes to the use of runic inscriptions and perhaps to writing in general.

The questions here concern who owned and used the objects with runic inscriptions. Can we get to know more about the person, the site, or the island? The aim of this study is to find out more about the social contexts in which runes were used by studying the provenience, distribution, and context of the artefacts. Are there any differences between the islands with regard to the social setting in which runic inscriptions were used?

The distinctions between the islands will be highlighted by two examples. The first is an overview of the use of runic inscriptions on personal objects. Second, we will turn to a comparison between two women equipped with runic objects on Öland and Gotland i.e. the women in the Klinta grave and the Fröjel grave respectively. Finally, the topic of runes and trade will be discussed with reference to the recent reinterpretations of some whetstones as touchstones by Martin Ježek (2016, 2017).

Runes on personal objects

Runic inscriptions from the Vendel period are notoriously difficult to date. Sometimes it is even impossible to judge whether the carver intended to use the older or the younger futhark. While it will be uncertain exactly which finds to date to the Vendel period it is clear that Öland, Gotland and Bornholm all have a share of them and show evidence of runic writing in this meagre period, even if the number of finds is small (Fig. 1). After this period of scarcity, the early 9th century saw the use of runic inscriptions increase again, but they now exhibit a distinguished regional variation in the choice of application, which can be illustrated by the metal artefacts with runes in the Viking period (Fig. 2).

Rune finds on Gotland are widely distributed, socially and geographically, as well as on a variety of objects such as dress items, weapons, whetstones and even a silver bowl. On the other hand, and in spite

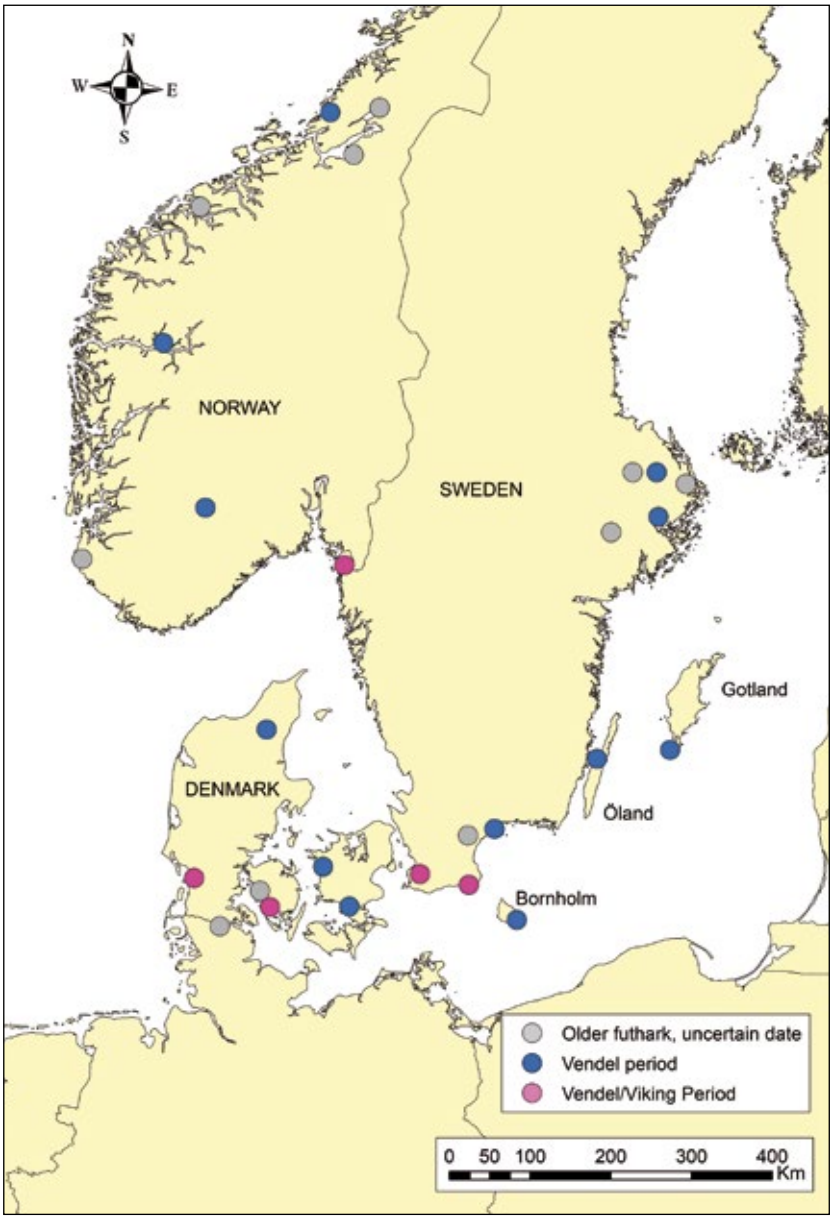


Fig. 1. Runic inscriptions in the Vendel period.
Blue = Vendel period (c. 550–800).
Pink = Vendel/Viking period (c. 675–900).
Grey = inscriptions in the older futhark with an uncertain dating.
Dating according to Imer (2007) and SRD, with references cited therein.
Bracteats are excluded, although some have datings ranging into the 7th century.
Map: Laila Kitzler Åhfeldt, Swedish National Heritage Board.

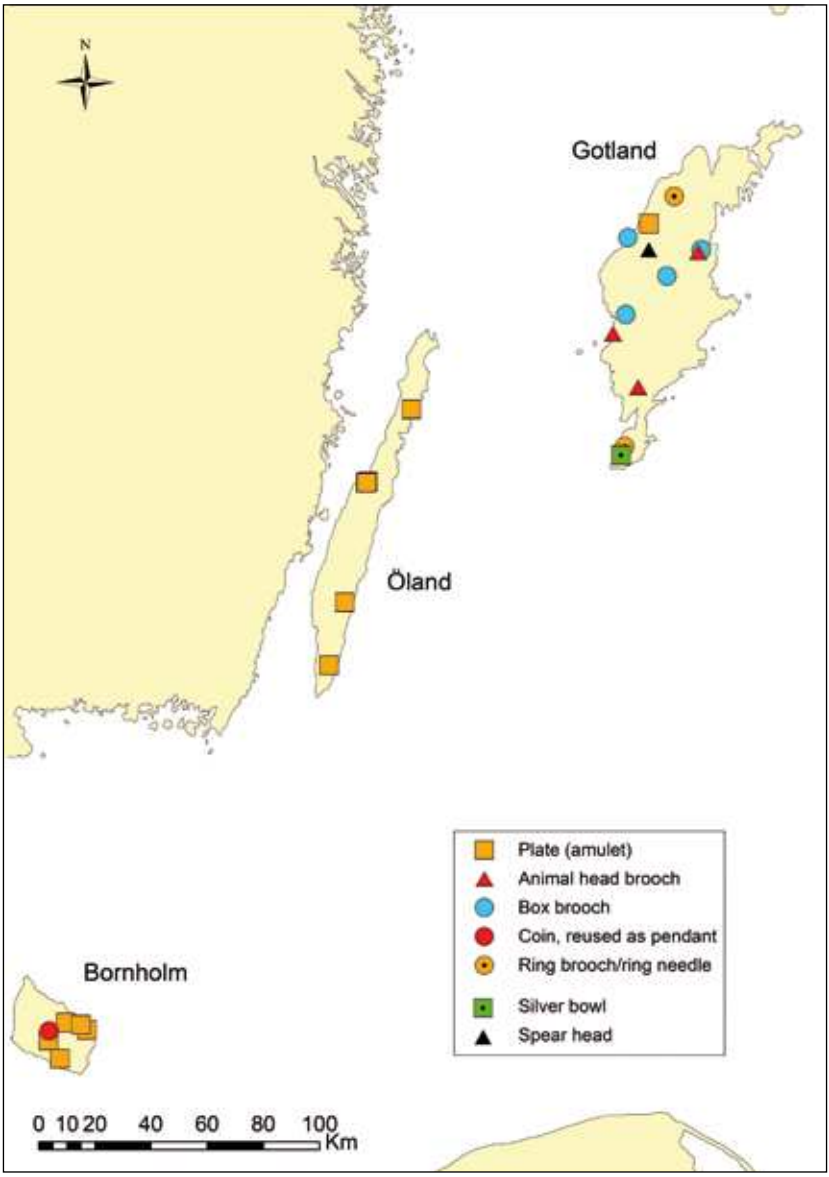


Fig. 2. Metal artefacts with Viking period runic inscriptions, c. 800–1100 AD. Artefacts with a dating interval starting in the 11th century AD have been included, even when the possible dating interval extends into the Middle Age (mostly concerning runic plates from Bornholm).
Map: Laila Kitzler Åhfeldt, Swedish National Heritage Board.

Fig. 3. G 355. Gotlandic animal head brooch, now in Lund.
Photo: Bengt A Lundberg, Swedish National Heritage Board, 1997.

of an early find from Hallbjäns (G 361, 8th century), runic amulets such as plates are rather rare. Instead, Gotland is the only one of our three islands where there are runic inscriptions on Viking period brooches, which occur from the 9th century onwards.[1]

The female brooches are of characteristic Gotlandic types: animal head brooches (Fig. 3) and box brooches. Although runic inscriptions appear on jewellery, they do not appear on the most exclusive brooches but rather on those of moderate value (Thunmark-Nylén 1984:105–108; 1986:75). There are two ring brooches, probably male objects, and 12 female brooches either found on Gotland or of probable Gotlandic origin[2]. The ring brooches have a Gotlandic flavour about them as well; it has even been suggested that those with animal head terminals are symbols of Gotlandic identity (Thunmark-Nylén 1983a:172; 1983b:312; Gustin 2004:216). One of the ring brooches, G 10, is of Carlsson's type DJU:RU* rak:a and can thus be dated to the 10th century (Carlsson

1. There are pre-Viking brooches with runic inscriptions, for example rosette fibulas (Przybyła 2015), but the remaining four Viking period brooches with runic inscriptions, that I know of, are distributed on England (1), Scotland (1) and Denmark (2, including Scania).

2. The silver disc brooch (FI SAO1987:38 in SRD) from Tuukala in Carelia, Finland, is not included in the discussion.

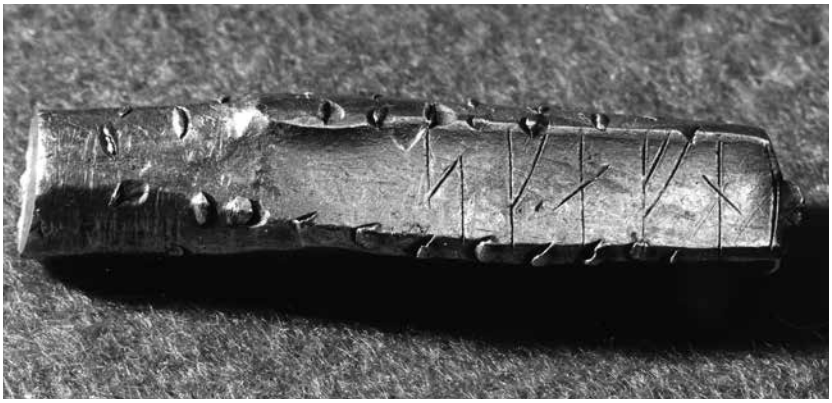


Fig. 4. G 273. Part of a ring needle, subjected to pecking and deposited as hack silver. Photo: Raymond Hejdström 1984, Runverkets bildsamling, Swedish National Heritage Board.

1988:70-72, Cat. no. 83.2). The other, G 273, is a fragment of a large 10th-century silver ring brooch found in the Karlsskatten treasure hoard (Trotzig & Linder Welin 1967; Fig. 4). Interestingly, there are indications that this ring brooch had not been produced on Gotland. This is due to the fragmentation and the large number of marks from test pecking, which means that it was deposited as hack silver. Since Gotlanders disliked cutting up their own native jewellery and, in addition, did not subject them to pecking to the same degree as foreign objects (Gustafsson 2013:109), it is therefore likely to have been imported.

To the ring brooches we can add one or possibly two weapons. The sword handle G 353 made of antler with rune-like signs (it is hard to judge whether they really are runes, but they are intended to be) can now be dated to the end of the 8th or the 9th century (Androshchuk 2014:46, 327, Cat.no. Go 179). It was imported from the Carolingian empire and might have belonged to a member of the local elite who organised military expeditions (Androshchuk 2014:46, 243–244). The other weapon is a 10th-century silver ornamented spear head (G 225) of a type that has previously been associated with the trade route to Kiev, which may have arrived on Gotland through gift exchange rather than trade (Mägi-Lôugas 1993:220, 298).

The Gotlanders tried runic plates but they did not gain such a high popularity as on Bornholm. The lack of runic amulets on Gotland when compared to Bornholm has been explained by the more systematic use of metal detectors on Bornholm (Imer, forthcoming), but there is no lack of other metal finds with runic inscriptions. The runic plate from the 8th-century grave in Hallbjäns is one of the earliest runic plates, but few other examples are known from Gotland. The Gotlanders do not seem to have felt the need to use runic amulets specifically, but may have rather used runes to create ownership inscriptions and labels on objects with practical use. We may infer that, for a Gotlander, runes lacked magic potential and were not considered as a tool for cure or protection. It is possible that some of the whetstones and touchstones may have been regarded as protective amulets, but the inscriptions are less explicit than the formulae that feature on the plates. They might have even preferred other types of amulets, if these were something that were indispensable to medieval people. We know of other regional preferences, e.g. the Thor's Hammer rings are found in graves on the Swedish mainland (Andersson 2005:48) and on Öland, but not on Gotland. We may ask whether runic amulets were associated with some special aspect of divine power which attracted varying degrees of interest in different regions. The (probably) medieval plate G 278 has a long inscription with formulae in Latin and a woman's name, Guðlaug, a name untypical for Gotland (see G 278). It might be significant that one of the few amulet inscriptions on Gotland may refer to a non-Gotlandic woman.

Coins are a special case, where single runes or rune-like signs sometimes appear (Hammarberg & Rispling 1985:65–67). From a runological perspective, these are often not regarded as runic inscriptions proper; rather, the (possible) runes have been treated as symbols or owner's marks. An example of this is a coin dated to 955 AD with a sign similar to the **d**-rune in the older futhark (Per Widerström, pers. comm.), which generally went out of use in the 8th or early 9th century.

When compared to Gotland, the use of runes on Bornholm is very rare. Thus far, no runic inscriptions have been found on any weapons, brooches or other personal objects except plates. In spite of several Migration-period runic bracteates, a runic inscription on the 7th-century Lousgård bead (possibly amulet; Stoklund 2006:365), and a Vendel-

period antler piece, runes are absent in the 9th and 10th centuries. Throughout the Viking Age, the use of runes is limited exclusively to runestones and runic plates, the latter appearing from the 11th century onwards when we find the Østermarie amulet and the so-called Bornholm amulet, a reused silver coin dated to 885-896 but with a secondary late Viking runic inscription (Stoklund 2003:858f.; Steenholt Olesen 2007:9). It has been argued that re-used coins were very personal objects and that they had a specific symbolic value related to concepts of metals, economic value, exoticism and associations with influential foreign powers (Audy 2018:239-240). Runologically, the two silver amulets are of the same type as the runestones on Bornholm and they may well be contemporary (Steenholt Olesen 2007:9, 11). It might be asked whether there is a connection between them and whether the amulets have been produced by rune stone carvers, or if they perhaps were imported as suggested by Højgaard Holm (2014:262). Imer and Steenholt Olesen argue that while the amulets were produced by church people, they still may well have been carved on Bornholm (Imer and Steenholt Olesen 2018:150; Imer, forthcoming). There is another handful of possibly 11th-century amulets, although their potential dating spans from the 11th to 14th centuries. Runic plates seem to have been adopted with enthusiasm by the medieval people on Bornholm, judging by the many finds from settlements. The runic inscriptions inside folded amulets mostly consist of excerpts of well-known religious formulae, evidently not meant to be read any longer but still considered as having a protective function (Steenholt Olesen 2007:6, 8; Imer & Steenholt Olesen 2018:125). The runic inscriptions thus seem to have been regarded as having other qualities than on Gotland; they were useful for protective purposes as part of the magic arsenal but they were not suitable for use on everyday objects and they were most often hidden. Runic proficiency might have been lacking or limited to fewer people. Certainly, preservation conditions must also be taken into account, as there may have been runic inscriptions on more perishable materials such as wood, and it is worth noting that medieval wooden amulets are known from Greenland and Norway (Imer & Steenholt Olesen 2018:123).

On Öland, the use of runes is more varied than on Bornholm and Gotland. The number of Viking Age amulets on Öland almost equals that of Bornholm, but in addition to these there are other objects as

well. Öland is distinguished by finds of runic plates in special circumstances or in a somewhat exclusive social environment, of which the Klinta grave is the best example. Öland is additionally the only one of our three islands where rune finds have been made in fortification contexts, i.e. in Eketorp and Gråborg. There are also rune finds in urban environments, namely Köpingsvik. It might be mentioned that, as a consequence of the discovery of the winter camp of the Viking Great Army in Torksey (Hadley et al. 2016), fortifications are now discussed in the light of urbanisation too, and that they may in some cases be considered as proto-urban environments. In view of this, we need to ask if the rune finds from Eketorp and Gråborg should be regarded as being found in proto-urban contexts, too. Both Öland and Gotland have yielded three rune bones each, but it seems symptomatic of Gotland's generally wide distribution of runes that the rune bones are scattered on three different sites, whereas on Öland they are all from the same town layer in Köpingsvik. This reinforces the impression that even though runic inscriptions appear on a range of objects on Öland, their use and distribution was more limited than on Gotland.

The Klinta grave and the Fröjel grave

The second example that may highlight the differences between Öland and Gotland is a comparison between the Klinta and Fröjel graves. Both graves are 10th-century female graves located in ports of trade, each containing a runic object. On Öland, the woman in the Klinta grave (59:3 in Köping parish) provides some evidence for runic objects belonging to the aristocracy. The find context for the runic plates is remarkable, given that they were found in what has been interpreted as a völva grave (Price 2002:142). This cremation grave is in every way exceptional, both in terms of its intricate burial rituals and the exotic objects, such as an Oriental bronze jug, contained within. The grave goods bear witness to long-distance contacts, with connections to the eastern trade networks and the Mälar basin (Hedenstierna-Jonson 2015:143-145). Sadly, the inscriptions on the Klinta plates have not been interpreted but they are most probably lexical (Pereswetoff-Morath 2017:216).

In contrast to this, the woman buried in grave 9/89 (Bottarve 1:17) at the Fröjel harbour site on Gotland was interred within an inhumation grave according to local custom and with local dress (Carlsson

1999). Her dress pin and chatelaine brooches (Sw. *redskapsspännen*) are typical of Gotlandic Viking Age dress with lingering Vendel artefact categories. She also had an old and rather exclusive 9th-century gilded box brooch, which was possibly an heirloom. It is interesting to note that she might have been involved in trade and/or the handling of precious metal, as indicated by the spheroid weight with flat poles found in the grave. This type of weight is generally related to the silver trade and the operation of bullion economies, rather than those used in craft activities such as bronze casting (Gustin 1999:248, 256). The social meaning of one singular weight in a grave has been debated. In any case, it is rather unusual on Gotland but a more frequent custom on the southern part of the island than on the north (Toplak 2016:207 Abb.3.1.6.2-4). As such, the grave gift is still in line with local custom. The woman's runic object is an animal head brooch, a characteristic Gotlandic object, with a plain matter of fact inscription, **kika**, normalised as *kinga*, which means "brooch" or "pendant" (Källström 2016:75). The grave is relatively rich but not exceptional – there are indications of wealth but not of excess, which contrasts to the luxuries found in the Klinta grave. Both sites are well-developed harbour sites, but the runic objects found there and the people owning them are quite different, the one seemingly an aristocratic ritual specialist while the other possibly was connected to the sphere of trade.

Runes, precious metals and metal craft

Whetstones are the only objects with runic inscriptions that may be considered as tools on Viking Age Öland and Gotland. None are known from Bornholm. Whetstones with runic inscriptions have mainly been found on northern Gotland, e.g. in Boge parish, a well-known port of trade and where we also find the famous Pilgård stone (see Kilger and Källström in this volume). In addition to their function as tools, miniature and oversized whetstones indicate that these objects may have also been used as amulets or for ritual purposes (Sundbergh 1976:14-15 with further references). Recently, some of these objects have been reinterpreted as touchstones, which would connect them to the handling of precious metals and metal craft, as well as the testing of ore (Ježek 2016; 2017). The objects from Norrgarde (G 237; Fig. 5) and

Fig. 5. G 237. Whetstone, or possibly touch stone, from Norrgarde in Vallstena parish on Gotland. Photo: Bengt A Lundberg, Swedish National Heritage Board, 2007.

possibly the supposed whetstone from Borgholm castle on Öland (Öl Fv1918(2);15) may be candidates for touchstones.

The touchstones can, but do not have to be, connected to trade. Via the touchstones, there may be a connection between runes, the handling of precious metals, and metal craft. This may further strengthen the connection between runes and silver, as suggested by Kilger (this volume). Finds from Hedeby and the general distribution of short twig runes have earlier been interpreted as signs of a trade correspondence during the 10th-11th centuries (Sanness Johnsen 1987:736f; Düwel 2001:92; Toplak 2016:299-300). Kilger (this volume) takes this a step further by suggesting that the regional distribution of different systems of runic writing on Gotland might be connected to professional agents of trade, and from a numismatic perspective makes a very interesting link to the changing directions of the silver current. The runic objects on Gotland, however, are by no means restricted to the harbour sites – most of them have in fact been found in the interior of the island. One reason for this might be that the ports of trade have a larger inclusion

of Christian graves and that the custom of including grave gifts in burials – and thus the chance to find runes – was abandoned earlier in coastal sites than at the rural burial grounds inland (Toplak 2016:240).

On Öland there may be an additional indication of a connection between runic inscriptions and metal craft demonstrated by a runic plate found in a posthole in a metalworking context (Pereswetoff-Morath 2017:143; Gustavson 2004:63). It might also be mentioned that a Gotlandic-style animal head brooch was found close by (Schulze et al. 2004:188).

What caused the distinction between the islands?

The choice of different kinds of small objects for the application of runic inscriptions reveals that the islanders had different views on the matter. My question to the workshop concerned what other sources reveal about relations between the islands and the outside world, and how evidence for different attitudes to runic script can help us to understand why Bornholm is lacking runic inscriptions for almost two centuries. Lisbeth Imer (forthcoming) suggests that the answer to this question lies in the single central power in Sorte Muld. Power rested in one place, and as such competing groups may not have possessed the means to express their own authority through the raising of runestones. Another possible explanation for the distinction between the islands could be that Gotland became involved in the process of urbanisation at an earlier point in time. According to Matthias Toplak, urbanisation and differentiation between urban and rural societies began earlier on Gotland than previously thought. He argues that Visby developed as an inter-regional proto-urban trade center by the end of the 10th century (Toplak 2016:345), something which may have been lacking on Bornholm. The influence of Bornholm instead declined during the Viking Age, when Sorte Muld loses its importance (Aarsleff 2008:119–120; Watt 2008:26–27; Imer, forthcoming). Perhaps the knowledge and use of runes was restricted to certain groups; i.e. to those who raised runestones. We cannot rule out the possibility that runes may have been used on more perishable materials (e.g. wood, bone and textile), but metal detecting activity on Bornholm has been so large and systematic (Nielsen 1994:125; 2000; Imer & Steenholt Olesen 2018:123) that the lack of metal objects with runic inscriptions during the Viking

Age, other than runic plates from the 11th century and onwards, may be presumed to reflect a real difference in the use of runes during this period. Part of the explanation for this disparity may be found in the strategies for defining group identity on different islands (see Raffield in this volume), i.e. it is possible that runic inscriptions were a part of the islanders' respective group identity and that they were therefore susceptible to being used in different ways. The use of runes on various categories of objects on Öland, ranging from exciting runic plates to more profane objects, agrees with Torun Zachrisson's view of Öland as being between two different spheres of influence – the Swedish and the Danish – resulting in a changing and ambivalent situation on the island (Zachrisson in this volume).

Conclusion

In sum, it is clear that people on Öland, Gotland, and Bornholm had different notions regarding the proper use of runes during the Viking Age. While the tradition of runestone carving is common (though with evidence for local variation) to all of the islands, when it comes to their use on personal objects these traditions clearly differed. Runic writing was used on many kinds of objects on Gotland, whereas it is much more restricted on Öland and Bornholm. Runic competence may have been limited on Bornholm, where runic inscriptions are basically restricted to runestones and amulets, while the use of runes was an everyday custom on Gotland. Judging by the dearth of amulets in contrast to Bornholm, they may have been considered to lack a magic aura. Finally the uses of runes on Öland, where we find runic plates along with other objects, may have been more mixed and ambivalent.

References

Aarsleff, E. 2008. Fund fra vikingetiden. In: *Sorte Muld*, C. Adamsen, U. Lund Hansen, F. O. Nielsen and M. Watt (eds.). Rønne: Bornholms Museum, pp. 119–121.

Andersson, G. 2005. With Thor on our side: the symbolism of the Thor hammer-ring in Viking Age burial ritual. In: *Dealing with the dead: archaeological perspectives on prehistoric Scandinavian burial ritual*, T. Artelius & F. Svanberg (eds.). Stockholm: The Swedish National Heritage Board & The Museum of National Antiquities in Sweden, pp. 45-62.

Androshchuk, F. 2014. *Viking swords: swords and social aspects of weaponry in Viking Age societies.* Stockholm: Historiska.

Audy, F. 2018. *Suspended value: using coins as pendants in Viking-Age Scandinavia (c. AD 800–1140).* Stockholm Studies in Archaeology 74. Stockholm: Stockholm University.

Carlsson, A. 1983. *Djurhuvudformiga spännen och gotländsk vikingatid.* Stockholm Studies in Archaoelogy 5. Stockholm: Stockholm University.

Carlsson, A. 1988. *Vikingatida ringspännen från Gotland.* Stockholm Studies in Archaeology 8. Stockholm: Stockholm University.

Carlsson, D. 1999. *"Ridanäs": Vikingahamnen i Fröjel.* Skrifter nr 2. Visby: ArkeoDok.

Düwel, K. 2001. *Runenkunde.* 3., vollst. neu bearb. Aufl. Stuttgart: Metzler.

G + number = runic inscription published in Jansson, S. B. F., Wessén, E. & Svärdström, E. 1961–81. Gotlands runinskrifter 1–2, Sveriges runinskrifter 11–12. Stockholm: Almqvist & Wiksell international. – Numbers over 222 are published in Gotlands runinskrifter 3, preliminary manuscript by H. Gustavson & Th. Snædal available on the website of Swedish National Heritage Board <https://www.raa.se/kulturarv/runor-och-runstenar/digitala-sveriges-runinskrifter/gotlands-runinskrifter-3/>.

Gustafsson, N. B. 2013. *Casting Identities in Central Seclusion: aspects of non-ferrous metalworking and society on Gotland in the Early Medieval Period.* Theses and Papers in Scientific Archaeology 15. Stockholm: Stockholm University.

Gustavson, H. 2004. Runor på föremål från Köpingsvik. In: *Köpingsvik på Öland – 30 undersökningar 1970–1994: arkeologiska undersökningar i Köpingsvik, utförda av Riksantikvarieämbetet och Kalmar läns museum: RAÄ 215, 216 m fl, Köpings s.,* H. Schulze, M. Blohmé, H. Gustavson & H. Hjelmqvist (eds.). Kalmar: Kalmar läns museum, pp. 63–70.

Gustavson, H. & Snædal Brink, T. 1981. Runfynd 1980. *Fornvännen* 76, pp. 186–202.

Gustavson, Helmer & Snædal, Thorgunn. 1984. Runfynd 1983. *Fornvännen* 79, pp. 252–259.

Gustin, I. 1999. Vikter och varuutbyte i Uppåkra. In: *Fynden i centrum: keramik, glas och metall från Uppåkra,* B. Hårdh (ed.). Acta archaeologica Lundensia. Series in 80, 30. Uppåkrastudier 2. Stockholm: Almqvist & Wiksell International, pp. 243–269.

Gustin, I. 2004. *Mellan gåva och marknad. Handel, tillit och materiell kultur under vikingatid.* Lund Studies in Medieval Archaeology 34. Lund: Lund University.

Hadley, M. D. & J. Richards. 2016. The Winter Camp of the Viking Great Army, AD 872–3, Torksey, Lincolnshire. *The Antiquaries Journal* 96, pp. 23–67.

Hammarberg, I. & Rispling, G. 1985. Graffiter på vikingatida mynt. *Hikuin* 11: *[Festskrift om mønter til Brita Malmer]*, B. Malmer (ed.). Højbjerg: Forlaget Hikuin, pp. 63–78.

Hedenstierna–Jonson, C. 2015. Särskilda kvinnor i Klinta. In: *Grävda minnen. Från Skedemosse till Sandby borg,* K. Arnell & L. Papmehl-Dufay (eds.). Kalmar: Kalmar läns museum, Kalmar läns hembygdsförbund & Länsstyrelsen Kalmar län, pp. 140–153.

Højgaard Holm, L. 2014. De bornholmske runesten og deres inskrifter. In: *Bornholmske Samlinger*, Række IV, Bind 8, pp. 260–299.

Imer, L. 2007. *Runer og runeindskrifter – kronologi, kontekst og funktion i Skandinaviens jernalder og vikingetid.* København: Det Humanistiske Fakultet, Københavns Universitet.

Imer, L. & Steenholt Olesen, R. 2018. In the beginning was the Word…: new finds of lead amulets in Denmark. In: *Epigraphy in an intermedial context*, A. Bauer, E. Kleivane & T. Spurkland (eds.). Dublin: Four Courts, pp. 123–155.

Imer, L. Forthcoming. Runic writing on Bornholm. In: *Privat och offentligt runbruk på Österjöns öar* [prel.title], L. Kitzler Åhfeldt & M. Källström (eds.). Stockholm/Visby: Swedish National Heritage Board.

Ježek, M. 2016. Functional, symbolic or ritual? On several tools from the furnishing of aristocratic burials in eponymous Vendel, Sweden. *Archaeological & Anthropological Sciences* Volume 8 Issue 3, pp. 491–504.

Ježek, M. 2017. *Archaeology of touchstones: an introduction based on finds from Birka, Sweden.* Leiden: Sidestone Press.

Källström, M. 2016. Viking Age Runes. In: *We call them Vikings,* G. Andersson (ed.). Stockholm: Historiska, pp. 72–79.

Mägi-Lôugas, M. 1993. On the Relations between the Countries around the Baltic as Indicated by the Background of Viking Age Spearhead Ornament. *Fornvännen* 88, pp. 211–221.

Nielsen, F. O. 1994. Middelaldergårde på Bornholm. *Hikuin* 21, pp. 125–138.

Nielsen, F. O. S. 2000. Bornholms museums antikvariske arbejde. *Bornholms Museum* 1998–1999, pp. 57–92.

Pereswetoff-Morath, S. 2017. *Vikingatida runbleck: om läsningar och tolkningar.* Uppsala: Institutionen för nordiska språk, Uppsala universitet.

Price, N. 2002. *The Viking Way: religion and war in late Iron Age Scandinavia.* Aun 31. Uppsala: Dept. of Archaeology and Ancient History, Uppsala universitet.

Przybyła, M. 2015. Decorative fibulae with runic inscriptions in the Late Roman Period. In: *Archäologie und Runen. Fallstudien zu Inschriften im älteren Futhark*, O. Grimm & A. Pesch (eds.). Egänzungsreihe 11. Schleswig: Schriften des Archäologischen Landesmuseums, pp. 347–386.

Sanness Johnsen, I. 1987. Die Runeninschriften ûber Handel und Verkehr aus Bergen (Norwegen). In: *Untersuchungen zu Handel und Verkehr der vor– und frühgeschichtlichen Zeit in Mittel- und Nordeuropa. T. 4, Der Handel der Karolinger- und Wikingerzeit: Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas in den Jahr,* K. Düwel & I. Jansson (eds.). Göttingen: Vandenhoeck & Ruprecht, pp. 716–744.

Schulze, H., Blohmé, M., Gustavson, H. & Hjelmqvist, H. 2004. *Köpingsvik på Öland – 30 undersökningar 1970–1994: arkeologiska undersökningar i Köpingsvik, utförda av Riksantikvarieämbetet och Kalmar läns museum: RAÄ 215, 216 m fl, Köpings sn, Borgholms kn, Öland.* Kalmar: Kalmar läns museum.

SRD = *Samnordisk runtextdatabas*, http://www.nordiska.uu.se/–forskn/samnord.htm, rune text file 2015–03–24 [accessed 2 May 2018]. Uppsala: Institutionen för nordiska språk, Uppsala universitet.

Steenholt Olesen, R. 2007. Runic Amulets Made of Metal from Medieval Bornholm. *Lund Archaeological Review* Volume 2005–2006, pp. 5–16.

Stoklund, M. 2003. Bornholmske Runeamuletter. In: *Runica – Germanica – Mediaevalia*, W. Heizmann & A. van Nahl (eds.). Ergänzungsbände zum Rellexikon der Germanischen Altertumskunde 37. Berlin/New York: Walter de Gruyter, pp. 854–870.

Stoklund, M. 2006. Chronology and Typology of the Danish Runic Inscriptions. In: *Runes and their Secrets: Studies in Runology*, M. Stoklund, M. L. Nielsen, B. Holmberg & G. Fellows-Jensen (eds.). Copenhagen: Museum Tusculanum Press, pp. 355–383.

Thunmark-Nylén, L. 1983. *Vikingatida dosspännen – teknisk stratigrafi och verkstadsgruppering.* Aun 4. Uppsala: Institutionen för arkeologi, Uppsala universitet.

Thunmark-Nylén, L. 1984. Socialgrupper i vikingatiden. *Gotländskt Arkiv* 56, pp. 105–110.

Toplak, M. 2016. *Das wikingerzeitliche Gräberfeld von Kopparsvik auf Gotland Studien zu neuen Konzepten sozialer Identitäten am Übergang zum christlichen Mittelalter.* Tübingen: Eberhard Karls Universität.

Trotzig, G. & Linder Welin, U. S., 1967. Silverskatten från Karls i Tingstäde. *Gotländskt arkiv* 39, pp. 61–80.

Watt, M. 2008. Sorte Muld – Past and Present. In: *Sorte Muld*, C. Adamsen, U. Lund Hansen, F. O. Nielsen & M. Watt (eds.). Rønne: Bornholms Museum, pp. 12–27.

Williams, H. 2005. Nytt runfynd från Öland. *Nytt om Runer* 18 (2003), pp. 26–27.

Öl Fv1918(2);15 = runic inscription published in *Fornvännen* 1918(2), pp. 1–36, Tillväxten under år 1917.

CECILIA LJUNG

Regional diversity and religious change – Late Viking Age burial and commemoration on Öland and Gotland

Introduction

The transition from a Viking Age society to a medieval culture of Continental character constituted a protracted process with considerable regional diversity. The archaeological record from Öland as well as Gotland, with numerous silver hoards, late runestones and conservative burial customs, demonstrates that older traditions lingered for a considerable period of time on the large islands of the Baltic. As stressed throughout this volume, the Baltic Sea was never a barrier. Instead, it connected regions as waterways comprised the most important means of communication. In this context the islands functioned as communicative and cultural nodes, where traditions melted and blended. At the same time the islanders developed a strong local identity expressed through a distinctive material culture (Raffield, Papmehl-Dufay, and Gustafsson this volume).

Despite acting as nodes in trade networks and catalysts for cultural exchange, both Öland and Gotland were almost definitely conceived of as peripheral areas from the view-point of the emerging central power on mainland Sweden during the late Viking Age and early medieval period (Ljung 2016a:243–247). Thus, centrality is a matter of perspective; or perhaps more specifically the extent of different social networks and the scope of their influence. One of the most important cultural encounters of the period was that with Christianity. The Christianisation process and the establishment of an ecclesiastical organisation in central Sweden was closely connected with social structures, where power-relations and elite networks played a crucial role (Ljung 2016a; 2019). The special position of Öland and Gotland, which can be considered as being both central and peripheral at the same time, certainly affected the conversion of the islands. In this article I will discuss the local response to the Christianisation process on Öland and Gotland based on runestones, late picture stones and changing burial traditions.

Stone monuments and conversion period burial on Öland and Gotland

The Christianisation process on Öland and Gotland exhibit both similarities and differences regarding transformations of mortuary and commemorative practises. The Ölandic archaeological record shows that a significant shift in mortuary customs takes place around the turn of the new millennium, in 1000 AD or a little earlier. Cremation burial ceased altogether, and north-south orientated inhumation graves were replaced by burials facing east-west, with the head of the dead positioned in the west. The buried individuals were often placed in wooden coffins. At the same time, there was a drop in the number of grave goods and the composition of artefacts changed (Svanberg 2003:64–75). The introduction of new mortuary practices correlates with the beginning of the late Viking Age runestone period on Öland (Ljung 2016a:145). In around the middle of the 11th century the runestone tradition transformed as both the function and design of stone memorials altered, which can be linked to a shift in spatial context. A close examination of the Ölandic runestone corpus has revealed differences between a group of stones found in their original position in landscapes and at churches on one hand, and a group of stones that almost exclusively originate from ecclesiastical contexts on the other. Runestones in a landscape setting consist mainly of undressed boulders of irregular shape, often of monumental size, with incised ornamentation. The churchyard group by contrast is characterised by upright stones of minute size, with geometrical shapes, hewn edges and ornamentation in relief (Ljung 2016a:132–138) (Fig. 1).

There are structural similarities between Öland and mainland Sweden in that the runestone tradition changed when it was transferred from a landscape setting to a churchyard context. The resulting form of monuments, however, varied geographichally. Rune–carved grave monuments in the provinces of Östergötland, Västergötland, Södermanland, Närke and Småland mainly comprise cist monuments or recumbent slabs with or without head- or foot-stones; commonly referred to as early Christian grave monuments or Eskilstuna cists (Ljung 2016a). As I have demonstrated elsewhere, the Ölandic group of minute upright stones in churchyard contexts functioned in the same way as the mainland monuments; as grave markers (Ljung

Fig 1. Left: minute stone with Urnes-style ornamentation in relief from Hulterstad church, Öland (Hulterstad 12 in Ljung 2016b). The height of the larger fragment measures 67 cm. Right: runestone in landscape setting, Öl 36, Bjärby, Runstens parish erected by the roadside. The stone is 1.7 metres high. Photo: © Cecilia Ljung.

2016a:132–144). However, the islanders chose to give their churchyard memorials a distinctively different design from that of the mainland.

Rune–carved funerary monuments have hitherto been found at seven church sites on Öland. Their design mainly comprises a zoomorphic form of ornamentation that stylistically belongs to the second half of the 11th century, thereby providing an indirect date for the formation of churchyards on the island. It cannot be ruled out that churchyard burial precedes the erection of memorials (Ljung 2016a:138–144). However, there are some indications that the production of funerary monuments might have started slightly earlier in Köpingsvik, where almost two thirds of the total Ölandic corpus (77 out of 123 slabs and fragments) have been found (Ljung 2016a:138–141; 2016b). The significant number of funerary monuments must be seen in the light of the special

Viking Age settlement in Köpingvik (see Johnson & Schulze 1990; Schulze 2004), as well as the remarkably large Late Iron Age cemetery (see Svanberg 2003:252–257) (Fig. 2). The cultural layers have been dated from the early 10th century to around 1200, with a main activity phase in the period c. 1050–1125/50 (Johnson & Schulze 1990:52–54; Schulze 2004:40–47). Thus, it is interesting to note that the introduction of rune-carved funerary monuments concurs with the period of increased activity. Moreover, the horizontal stratigraphy suggests that the establishment of the churchyard in Köpingsvik can be understood as a continued extension of the large burial ground (Schulze 1987:37, 136). Köpingsvik kept its function as a major cemetery throughout the conversion period and evolved into what was probably the most important ecclesiastical site on Öland during the Early Middle Ages. The vast number of grave monuments indicates that people from a wide-ranging area chose to bury and commemorate their dead at the early churchyard (see Ljung 2016a:193–196). The marked size of the churchyard (almost 13 000 m^2, which is four times bigger than an average Ölandic churchyard) provides further evidence of this (Boström 2007:97 with references). The first stone church, which was probably built as early as c. 1100, had the dimensions of a cathedral and was equivalent in size to the contemporary 12th-century monastic church in Vreta and the cathedral in Linköping, both in Östergötland (Boström 2007:97–100). It is clear, therefore, that the structure was designed to become a major ecclesiastical foundation.

Despite the emergence of an ecclesiastical landscape on Öland from at least the mid-11th century, the traditional burial grounds stayed in use for a substantial period of time, probably well into the 12th century (Svanberg 2003:77; Ljung 2016a:177–178). Interestingly, there is also a considerable period of temporal overlap between traditional runestones in a landscape setting and rune-carved grave monuments at churchyards (Ljung 2016a:145). Consequently, different forms of burial practices existed side by side at both rural cemeteries and churchyards. Similarly, there is a parallel use of runic monuments in diverse spatial settings. The inscription on the Bjärby runestone, Öl 36, underlines this diversity in practice (see Fig. 1). The stone was raised in memory of Fastulf who was buried in the church, a very honourable position indicating that he was probably its founder. Stylistically the runestone

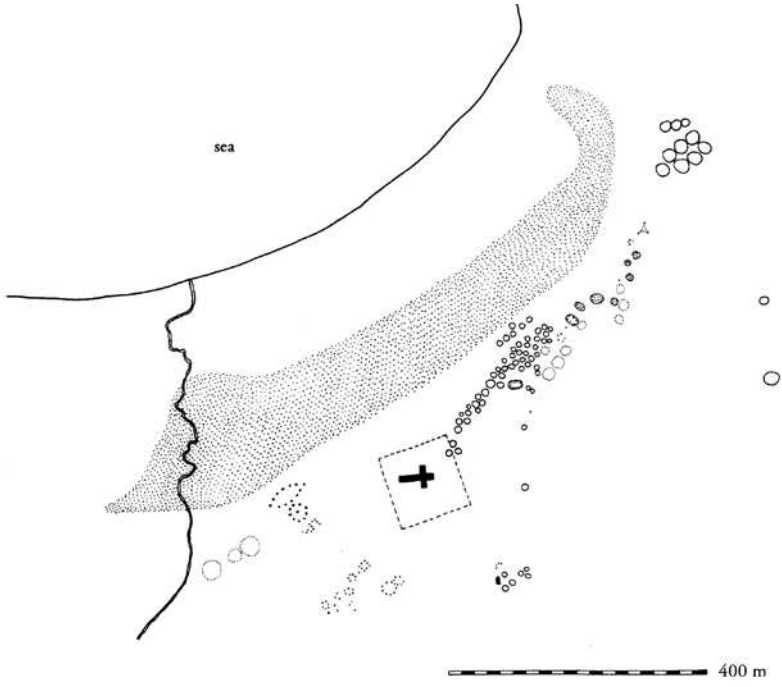


Fig. 2. The settlement area and cemetery area in Köpingsvik in relation to the churchyard. Reconstruction by Fredrik Svanberg based on a map by C. G. Hilfeling from 1796 and map 9 in Johnson & Schulze 1990. After Svanberg 2003:255 Fig. 107 with permisson.

can be dated to the mid–11th century, and as such it is contemporary with the rune-carved grave monuments (Ljung 2016a:146–148).

Compared with 11th-century Öland, diversity in burial and commemorative practices is even greater on Gotland. Whereas the runestone tradition is homogenous across Öland, and changes in burial customs seem to influence the whole island equally, there are apparent regional differences within Gotland. Picture stones were erected on Gotland for almost a millennium (Widerström 2012), but significant changes occur in the last phase (classified as type E-stones by Sune Lindqvist) – a group that comprises large mushroom-shaped stones, so-called 'dwarf' stones with the same shape, and cist-stones (Lindqvist 1941:52-61). These diverse monuments have different distributions; dwarf and cist stones were primarily erected on southern Gotland, whereas large stones are mainly found in the northern part of the island (Lindqvist

1941:57; Westphal 2004:421–422). The E–stones were dated by Lindqvist to the 11th century (1941:122–123), but some researchers have suggested a continuity into the 12th century (Andrén 1989:291; Lager 2002:92–95; Snædal 2002:66, 93–100; cf. Westphal 2004). The late picture stones have not gained as much scholarly interest as the iconic, earlier stones with their enigmatic imagery (see however Westphal 2004; Kitzler Åhfeldt 2019), though in my mind they constitute an important key to understand changes in 11th-century Gotlandic society.

The picture stone custom changed during the 11th century with the introduction of a new type of imagery; zoomorphic ornamentation and large crosses, together with an enhanced emphasis on the runic inscriptions. Several scholars have observed an influence from the Upplandic runestone tradition in terms of linguistics and stylistic design, as well as in craftsmanship techniques (Lindqvist 1941:52–53; Jansson 1945:147–149; Snædal 2002:100–102; Oehrl 2019:15–16; Kitzler Åhfeldt 2019). By these alterations a several hundred-year-old tradition rooted in pagan society became part of the Christian culture (Varenius 2012:43). Despite this, the shape of the monuments alludes to older traditions. Moreover, the phrasings of the runic inscriptions are unique to the island and the classic runestone ornamentation was adjusted to local taste, thus giving the memorials a specific Gotlandic design (Snædal 2002:100). In addition, monuments with figurative motifs rooted in the older tradition were still produced on the southern part of the island (Westphal 2004; Oehrl 2019:16, 20).

The diversity of 11th-century monuments on Gotland is striking and there is no easy way to explain this variety; but it is most likely dependent both on chronological differences and local traditions on the island (see also Snædal 2002:230). Another aspect that must be taken into consideration is the spatial location of the monument. It has been noted that smaller stones within the late picture stone tradition have more-frequently been found in ecclesiastical contexts and consequently they have been interpreted as churchyard memorials (Lindqvist 1941:124; *SRI* 11, 49–50; cf. Johansen 1997:215–222). There are clear similarities between this Gotlandic group of dwarf stones and the group of rune-carved grave monuments on Öland. Both comprise notably small upright stones, with hewn edges and ornamentation cut in relief (Ljung 2016a:159–160) (Fig. 3). Moreover, two Gotlandic

Fig. 3. Late picture stone (G 370) with ornamentation in relief from Hablingbo church on Gotland, dated to the second half of the 11th century. The height of the stone above ground is c. 1.1 m. Photo: © Anders Andrén, with permission.

mushroom-shaped slabs recovered at Köpingsvik on Öland constitute a more direct link between the islands (see Köping 1 and 9; Ljung 2016b). The stones were brought from Gotland and functioned as gable slabs at each end of a now lost recumbent slab in a churchyard memorial (Ljung 2016a:135–136). Thus, it is tempting to interpret the dwarf stones on Gotland in a similar manner to the Ölandic material. However, not all dwarf-stones originate from church sites and the connec-

tion between different types of stone monuments and their landscape contexts on Gotland is complex. An analysis of this issue is beyond the scope of the present paper, but I would like to stress the fact that the diversity within the late picture stone tradition is mirrored in a diversity in late Viking Age mortuary practices on island.

It is not possible to distinguish a distinct shift in mortuary customs on Gotland, when overtly pagan burials ended. In northern Gotland the abandonment of older grave fields took place in the first part of the 11th century, somewhat earlier than in the southern part of the island, where the same process dates to the late 11th- and early 12th century (Staecker 1997:66). The so-called churchyard finds, cemeteries with east-west orientated inhumations where burials were strictly segregated according to sex, with women in the north and men in the south, demonstrate the existence of churchyard burials on Gotland during the 11th century (Trotzig 1969; Thunmark-Nylén 1989; 1995; Staecker 1997). Similar divisions occur occasionally in early churchyards in the Nordic region (see Staecker 2001; Mejsholm 2017), but specific to Gotland is the custom of burying the dead in their clothes together with dress ornaments and personal items (Trotzig 1969; Thunmark-Nylén 1989; 1995). The same type of objects occur in graves on traditional burial grounds located away from church sites, together with weaponry, food vessels and animal bones – finds that are otherwise absent in a churchyard context (Trotzig 1969). Contrary to churchyards, the traditional burial grounds are gender-mixed, with inhumation graves mainly orientated north-south together with sporadic cremation graves (Thunmark-Nylén 1989:214; Rundkvist 2003:75). Thus, both churchyard burial and lingering pagan mortuary traditions existed on 11th-century Gotland, but their interrelationship at a local level is debated (see Staecker 2001:236–244). It is uncertain whether there is a long period of contemporaneity (Thunmark-Nylén 1989:213, 223; 1995:162–166), or whether there was a successive development from the use of burial grounds to that of churchyards within each settlement area (Carlsson 1990). Likewise, there seems to be no consensus on how to understand the relation between shifting burial practices and late picture stones. Both Ola Kylberg (1991:169–169) and Birgitta Johansen (1997:208, 220–222) stress that there is a negative correspondence between churchyard finds and late picture stones; parishes with conversion period memo-

rials and furnished burials at churchyards exclude each other. Jörn Stacker's (2001:236–247) study of mortuary practices on Gotland on the other hand suggests a more complex situation, where late picture stones occur both in parishes with pagan burial grounds and churchyard finds (see also Rundkvist 2003:78–81). The diversity within the late picture stone tradition suggests that not all memorials were erected for the same purpose. A comprehensive survey that takes into consideration both the spatial context of the monuments and their materiality is sorely needed in order to better understand the relationship between burials and commemorative practices on the island.

To summarise, this overview demonstrates that it is possible to discern structural similarities between Öland and Gotland in that traditional burial grounds continued in use for a long period of time, alongside that of newly established churchyards. Equally, conversion-period stone monuments were erected in different spatial contexts. Yet, pagan burial rituals were practiced for a longer period on Gotland than on Öland. The situation on 11th-century Öland and Gotland resembles that in Uppland and north-east Södermanland, as well as the district of Möre west of Kalmar strait, where different forms of mortuary and commemorative practices existed side by side for a considerable period of time (Ljung 2016a:131, 155-163, 178). People who buried their dead at cemeteries on Öland during the late 11th century, or dressed in clothes with ornaments at early churchyards on Gotland, most likely considered themselves as Christians. Nonetheless, neither the use of traditional burial grounds nor furnished churchyard burials were in accordance with a stricter Christian burial doctrine (see Nilsson 1996:365–374; 2010; Staecker 2001:234), which raises questions regarding how ecclesiastical life was organised on the large islands in the Baltic.

Conversion in centre and periphery – islands and the mainland

The encounter with Christianity on Öland and Gotland was not remarkably late, but the islander's response towards religious change differed from that of mainland Sweden. What sets the situation fundamentally apart is that different mortuary and commemorative customs remained in use long–after the emergence of an ecclesiastical landscape. The requirement that burial should take place solely at churchyards was not enforced until a fairly late date on Öland as well

as Gotland. In the core areas of Sweden (Uppland and north-east Södermanland excluded), the old burial grounds seem to have been abandoned at an early stage, followed by the introduction of a more uniform Christian burial praxis. This correlates with a short runestone period, centred on the late 10th century and the beginning of the 11th century, together with a swift transformation of the runestone custom when it was transferred from a landscape to a churchyard context. Moreover, it is only possible to detect a short period of contemporaneity between traditional runestones in a landscape setting and early Christian grave monuments; thus, the churchyard had already become the only arena for burial and commemoration of the dead by the 11th century (Ljung 2016a:177–180). Hence, the most crucial difference between Öland and Gotland on the one hand and the mainland on the other is that of homogeneity and diversity. These regional differences should not necessarily be interpreted as indicative of varying levels or degrees of Christianity in the sense of faith and religious conviction; instead, it reflects differences in the way Christian life was organised, and whether it was centrally controlled or more decentralised with opportunities for choices based on family or household locality (Ljung 2016a:244). The implementation of a uniform Christian burial custom in mainland Sweden, restricted to churchyards only, required both secular and ecclesiastical authority that could impose and maintain these major transformations (Ljung 2016a:220–222 with references). Several circumstances indicate that the lack of uniform mortuary and commemorative practices on Öland and Gotland had its background in a fragmented landownership and/or in the absence of a strong central power during the late Viking Age and early medieval period. This probably made it difficult for the Church to gain a more permanent foothold (Ljung 2016a:244–247).

The diversity in ritual practice on 11th-century Gotland indicates that the decision to convert to Christianity was made at many different times by smaller units, probably reflecting estates or groups of farms (Rundkvist 2003:82–83; Andrén 2009:46). Anders Andrén (2009) argues that the first wooden churches were most likely built as part of individual initiatives at aristocratic estates, but contrary to the core areas in mainland Sweden Gotland lacked a social elite whose power emanated from large-scale landholdings. Consequently, there is

an absence of central control. Furthermore, Jörn Staecker (1997; 2001) observes that furnished churchyard burials occur in areas with a social and political structure that differed from the prevailing norms of the period, arguing that the Gotlandic churchyard finds should be understood in the light of a Russian/Byzantine missionary influence. It is therefore no coincidence that Adam of Bremen made no mention of Gotland in his history of the see of Hamburg-Bremen; the island did not form part of the western ecclesiastical organisation at that time (Staecker 1997:80–81; 2001:251). Furthermore, the authority of both the Swedish king and the Bishop of Linköping was very restricted on Gotland during the medieval period (Lindkvist 1983:281–282).

Contrary to Gotland, which upheld an independent position into the Middle Ages, Öland was probably absorbed into the Swedish realm by force. There is no trace of the domestic Viking Age aristocracy, made visible by large farms, silver hoards and runic monuments during the Middle Ages. Instead, the local nobility was both politically and economically insignificant, and by the end of the medieval period, around 40 % of the arable land was owned by persons and institutions residing ouside of the island; the crown, the church and the mainland nobility. This strongly suggests that a dramatic shift in land ownership had taken place at some point in the early Middle Ages. The crown and its allies were probably responsible for this radical transformation (Fallgren 2006:175, 181). Moreover, the fact that Öland most likely is not mentioned in the Florence list – a register of the Roman church provinces in Scandinavia dated to 1104/1120 – indicates that the island, like Gotland, did not form part of the early Church administration (see Tunberg 1913; Kumlien 1962; Tagesson 2002:66).

Consequently, several circumstances indicate that Öland and Gotland not only belonged to a social network that differed to that on mainland Sweden, but that they also maintained their independence from the emergent political and ecclesiastical powers of the late Viking Age and Early Middle Ages. As on another large island in the Baltic, namley Bornholm, this had an impact on the Christianisation process. There are apparent structural similarities between the three islands in burial and commemorative customs. A shift in mortuary practices on Bornholm, like on Öland, occurs around 1000 AD. The introduction of a new burial custom with inhumation graves facing east-west, practiced

Fig. 4. Recumbent grave slab (G 343) from St. Hans' church ruin in Visby. Photo: Bengt A. Lundberg, Swedish National Heritage Board, 1986.

at different sites than the old cemeteries, indicates a strong Christian influence (Svanberg 2003:125-126). The large sex-segregated Christian cemetery at Grødbygård with furnished inhumation graves, dated to the second part of the 11th century, seems to represent a later phase of conversion (Wagnkilde 1999; Svanberg 2003:126) and brings the Gotlandic churchyard finds to mind. The runestone period of Bornholm dates to c. 1025–1125, indicating that the tradition began concurrently with the introduction of new burial rituals – a time when it was coming to an end in the rest of the Danish area (Imer 2015:172; 2016:300). The composition of the 11th–century hoards on Bornholm implies that the island was not part of the Danish kingdom during the late Viking period, rather it constituted an independent economic and political unit (Ingvardson 2014:329). There was no powerful trading centre on Bornholm during the 11th century, instead the settlement pattern comprised individual farmsteads, indicating that the island had a decentralised social and political structure (Ingvardson 2014).

Contrary to Bornholm, trading centres on Öland and Gotland grew in influence during the 11th century. As already mentioned, activities in Köpingsvik increased around 1050. More advanced harbours seem to have developed on Gotland during the first half of the 11th century. The most important; Visby, Fröjel and Västergarn, are all located on the west coast, presumably along one of the main sea routes from the mainland (Gustafsson this volume). Sven Kalmring (2016) argues that

the larger Viking Age emporia and proto-towns might be understood as special economic and social zones, alien to the region where they were situated. Ny Björn Gustafsson (this volume) suggests that the larger Gotlandic harbours show similar tendencies; something that is mirrored in the development of a material culture that is more un-Gotlandic than that of inland settlements. Harbours and proto-towns did not only function as centres of production and trade but also as nodes for cultural exchange. It is well known that early urban sites were important for the spread of Christianity in Scandinavia, as they served as bridgeheads for the early Church. It is therefore no coincidence that the largest production of rune carved grave monuments on Öland was located at the harbour and special settlement at Köpingsvik (see Ljung 2016a:202-206), nor that the only 11th-century churchyard memorial on Gotland that can be regarded as a more direct counterpart to the early Christian grave monuments on mainland Sweden originates from Visby (G 343 from St. Hans church ruin). Hailgair was buried beneath a recumbent slab (G 343) with an ornamental layout similar to that of mainland monuments (Ljung 2016a:168–169) (Fig. 4). Contrary to other contemporary stone monuments on Gotland, whose shape alludes to the older picture stone tradition, the choise of a recumbent grave slab for Hailgair's memorial was a novelty. Thus, it might be understood as a reflection of what Gustafsson identifies as a development of a somewhat un–Gotlandic material culture in Visby and other harbour sites compared to Gotland at large. According to the *Guta Saga* the first church on Gotland was built by Botair from Akebäck in Kulstäde. However, this church was burnt down by the islanders, and Botair built a second church below the cliff at Vi (*Guta saga* ch. 3). The location of the second church to Visby and the fact that it unlike its predecessor was allowed to stand, should be understood in the light of the special status of the site, being something different than its hinterlands. Moreover, Halgair's grave slab was most likely placed at this very churchyard (Andrén 2011:98–100; Ljung 2016a:168–169). Altogether this suggests that the main harbours and coastal settlements that grew in influence during the 11th century, especially Köpingsvik and Visby, played a crucial role for the early church and its establishment on Öland and Gotland.

References

Andrén, A. 1989. Dörrar till förgångna myter. En tolkning av de gotländska bildstenarna. In: *Medeltidens födelse,* A. Andrén (ed.). Nyhamnsläge: Gyllenstiernska Krapperupstiftelsen, pp. 287–319.

Andrén, A. 2009. Vem lät bygga kyrkorna på Gotland? *Saga och Sed* 2009, pp. 31–59.

Andrén, A. 2011. Det *medeltida Gotland. En arkeologisk guidebok*. Lund: Historiska media.

Boström, R. 2007. Anteckningar om Köpingsvik och Ölands kyrkor. *Fornvännen* 102, pp. 97–106.

Carlsson, A. 1990. Gotland och Visby mellan vikingatid och medeltid – ett debattinlägg. *Meta* 1990:3, pp. 4–15.

Fallgren, H. 2006. *Kontinuitet och förändring. Bebyggelse och samhälle på Öland 200–1300 e Kr*. Uppsala: Institutionen för arkeologi och antik historia, Uppsala universitet.

G + number = runic inscription published in Jansson, S. B. F., Wessén, E. & Svärdström, E. 1961–81. *Gotlands runinskrifter* 1–2, Sveriges runinskrifter 11–12. Stockholm: Almqvist & Wiksell international. – Numbers over 222 are published in Gotlands runinskrifter 3, preliminary manuscript by H. Gustavson & Th. Snædal available on the website of Swedish National Heritage Board <https://www.raa.se/kulturarv/runor-och-runstenar/digitala-sveriges-runinskrifter/gotlands-runinskrifter-3/>.

Guta saga. In: *Guta Lag and Guta Saga. The law and history of the Gotlanders*. C. Peel (ed.). 2015. London: Routledge.

Imer, L. M. 2015. The Danish runestones – when and where? *Danish Journal of Archaeology* 3 (2), pp. 164–174.

Imer, L. M. 2016. *Danmarks runesten. En fortælling*. Photo Roberto Fortuna. København: Nationalmuseet & Gyldendal.

Ingvardson, G. T. 2014. Trade and power – Bornholm in the late Viking Age. In: *Northern Worlds – landscapes, interactions and dynamics. Research at the National Museum of Denmark. Proceedings of the Northern Worlds Conference Copenhagen 28–30 November 2012*, H. C. Gulløv (ed.). Odense: University Press of Southern Denmark, pp. 325–327.

Jansson, S. B. F. 1945. Gotlands runinskrifter. In: *Boken om Gotland. Minnesskrift med anledning av Gotlands återförening med Sverige genom freden i Brömsebro den 13 augusti 1645. Första delen. Gotlands historia fram till 1645*, M. Stenberger (ed.). Visby: AB Sylve Norrbys bokhandel, pp. 138–152.

Johansen, B. 1997. *Ormalur. Aspekter av tillvaro och landskap*. Stockholm: Stockholms universitet.

Johnson, M. & Schulze, H. 1990. *Köpingsvik. Medeltidsstaden 77.* Stockholm: Riksantikvarieämbetet.

Kalmring, S. 2016. Early Northern Towns as Special Economic Zones. In: *New Aspects of Viking Age Urbanism c. AD 750–1100. Proceedings of the International Symposium at the Swedish History Museum, April 17–20th 2013*, L. Holmquist, S. Kalmring & C. Hedenstierna–Jonson (eds.). Stockholm: Archaeological Research Laboratory, Stockholm University, pp. 11–21.

Kitzler Åhfeldt, L. 2019. Rune carvers traversing *Austmarr*? In: *Contacts and Networks in the Baltic Sea Region. Austmarr as a Northern Mare Nostrum, ca. 500–1500 CE*, M. Bertell, Frog &

K, Willson (eds.). Amsterdam University Press, Amsterdam, pp. 91–115.
Kumlien, K. 1962. Sveriges kristnande i slutskedet – spörsmål om vittnesbörd och verklighet. *Historisk tidskrift* 82, pp. 249–297.
Kyhlberg, O. 1991. *Gotland mellan arkeologi och historia. Om det tidiga Gotland*. Stockholm: Stockholms universitet.
Lager, L. 2002. *Den synliga tron. Runstenskors som en spegling av kristnandet i Sverige*. Uppsala: Institutionen för arkeologi och antik historia, Uppsala universitetet.
Lindkvist, T. 1983. Gotland och sveariket. In: *Gutar och vikingar*, I. Jansson (ed.). Stockholm: Statens historiska museum, pp. 281–287.
Lindqvist, S. 1941. *Gotlands Bildsteine I*. Stockholm: Wahlström & Widstrand.
Ljung, C. 2016a. *Under runristad häll. Tidigkristna gravmonument i 1000-talets Sverige*. Stockholm: Explicare.
Ljung, C. 2016b. *Under runristad häll. Katalog över tidigkristna gravmonument*. Stockholm: Explicare.
Ljung, C. 2019. Early Christian Grave Monuments and Ecclesiastical Developments in 11th-Century Sweden. *Medieval Archaeology* 63 (1), pp. 154–190.
Mejsholm, L. 2017. Kvinnor och män mellan himmel och jord. Segregering av de döda som kyrkopolitisk strategi. In: *Skiftet. Vikingatida sed och kristen tro. Ett mångvetenskapligt perspektiv på kristnandeprocessen i Mälarområdet*, S. Tesch (ed.). Skellefteå: Artos, pp. 157–184.
Nilsson, B. 1996. Från gravfält till kyrkogård. Förändringar och variation i gravskicket. In: *Kristnandet i Sverige. Gamla källor och nya perspektiv*, B. Nilsson (ed.). Uppsala: Lunne böcker, pp. 349–385.
Nilsson, B. 2010. Den tidiga medeltidens likbegängelse och begravningsritual i västkyrkan. In: *Från hedniskt till kristet. Förändringar i begravningsbruk och gravskick i Skandinavien c:a 800–1200*, B. Nilsson (ed.). Stockholm: Sällskapet Runica et Mediævalia, pp. 9–56.
Oehrl, S. 2019. *Die Bildsteine Gotland. Probleme und neue Wege ihrer Dokumentation, Lesung und Deutung. Teil 1:Text*. Friedberg: Likias Verlag.
Rundkvist, M. 2003. *Barshalder 2. Studies of Late Iron Age Gotland*. Stockholm: Department of Archaeology, Stockholm University.
Schulze, H. 1987. Köpings socken. In: *Ölands järnåldersgravfält. Volym 1. Alböke, Köpings, Räpplinge, Löts, Egby, Bredsätra och Gärdslösa socknar*, M. Beskow Sjöberg (ed.). Stockholm: Riksantikvarieämbetet och Statens historiska museer, pp. 21–138.
Schulze, H. 2004. *Köpingsvik på Öland – 30 undersökningar 1970–1994. Arkeologiska undersökningar i Köpingsvik, utförda av Riksantikvarieämbetet och Kalmar läns museum. RAÄ 215, 216 m fl, Köpings sn, Borgholms kn, Öland*. Kalmar: Kalmar läns museum.
Snædal, T. 2002. *Medan världen vakar. Studier i de gotländska runinskrifternas språk och kronologi*. Uppsala: Institutionen för nordiska språk, Uppsala universitet.
SRI = Sveriges runinskrifter, Various authors; published by Kungl. Vitterhets Historie och Antikvitets Akademien, 14 vols. to date, Stockholm 1900-.
SRI 11. *Gotlands runinskrifter, D. 1*. By Sven B. F. Jansson and Elias Wessén. 1962.
Staecker, J. 1997. Searching for the unknown. Gotland's churchyards from a gender and missionary perspective. *Lund Archaeological Review* 1996, pp. 63–86.
Staecker, J. 2001. In atrio ecclesiae. Die Bestattungssitte der dörflischen und städtischen Friedhöfe im Norden. In:

Lübeck style? – Novgorod style? Baltic Rim central places as arenas for cultural encounters and urbanisation 1100–1400 AD. Transactions of the central level symposium of the Culture Clash or Compromise (CCC) project held in Talsi September 18–21 1998, M. Auns (ed.). Riga & Visby: Nordik & Centre for Baltic Studies, Gotland University College, pp. 187–258.

Svanberg, F. 2003. *Death Rituals in South-East Scandinavia AD 800-1000. Decolonizing the Viking Age 2*. Stockholm: Almqvist & Wiksell International.

Tagesson, G. 2002. *Biskop och stad. Aspekter av urbanisering och sociala rum i medeltidens Linköping*. Stockholm: Almqvist & Wiksell International.

Thunmark-Nylén, L. 1989. Samfund och tro på religionsskiftets Gotland. In: *Medeltidens födelse,* A. Andrén (ed.). Nyhamnsläge: Gyllenstiernska Krapperupstiftelsen, pp. 213–232.

Thunmark-Nylén, L. 1995. Churchyard Finds from Gotland (11th–12th centuries). In: *Archaeology East and West of the Baltic. Papers from the Second Estonian-Swedish Archaeological Symposium, Sigtuna, May 1991*, I. Jansson (ed.). Department of Archaeology, Stockholm University, Stockholm, pp. 161-193.

Trotzig, G. 1969. Gegensätze zwischen Heidentum und Christentum im archäologischen Material des 11. Jahrhunderts auf Gotland. In: *Kirche und Gesellschaft im Ostseeraum und im Norden von der Mitte des 13. Jahrhunderts,* S. Ekdahl (ed.). Visby: Gotlands fornsal, pp. 21–30.

Tunberg, S. 1913. En romersk källa om Norden vid 1100-talets början. *Språkvetenskapliga Sällskapets Förhandlingar* 1910–1912, pp. 14–34.

Varenius, B. 2012. Bildstenar som öppningar till järnålderssamhället. In: *Gotlands bildstenar. Järnålderns gåtfulla budbärare*, M. Herlin Karnell (ed.). Visby: Gotlands Museum, pp. 41–48.

Wagnkilde, H. 1999. Slaviske træk i bornholmske grave fra tiden omkring kristendommens indførelse. En oversigt over gravpladser og skattefund fra 1000tallet på Bornholm. *Meta* 1999 (2), pp. 3–20.

Westphal, F. 2004. Untersuchungen zur späten Bildsteinsgruppe Gotlands. In: *Zwischen Tier und Kreutz. Untersuchungen zur wikingerzeitlichen Ornamentik im Ostseeraum*, M. Müller-Wille (ed.). Neumünster: Wachholtz Verlag, pp. 377–454.

Widerström, P. 2012. Sune Lindqvists indelning av bildstenar i olika kategorier. In: *Gotlands bildstenar. Järnålderns gåtfulla budbärare*, M. Herlin Karnell, (ed.). Gotländskt Arkiv 84. Visby: Gotlands Museum pp. 10–12.

Öl + number = runic inscription published in Söderberg, S. & Brate, E. 1911–18. *Ölands runinskrifter,* Sveriges runinskrifter 1. Stockholm: Almqvist & Wiksell international.

In *Relations and Runes* a number of specialists from the fields of archaeology, numismatics and runology explore the complexity of developments and relations in the Baltic Sea region during the Late Iron Age and Early Middle Ages. The contributions in the book cover a wide spectrum of topics and approaches highlighting how islands functioned as nodes in interaction and communication, while constructing and maintaining individual identities. With special focus on the islands of Öland, Gotland and Bornholm, in-depth studies of specific archaeological materials are set in a broader context of cultural development and change in the Baltic.

This book is the outcome of a joint venture between two research projects – The Viking Phenomenon and Everlasting Runes, and Gotland Museum.

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